

## CHAPTER NINE

# Qualitative Methods

Qualitative methods demonstrate a different approach to scholarly inquiry than methods of quantitative research. Although the processes are similar, qualitative methods rely on text and image data, have unique steps in data analysis, and draw on diverse designs. Writing a methods section for a proposal for qualitative research partly requires educating readers as to the intent of qualitative research, mentioning specific designs, carefully reflecting on the role the researcher plays in the study, drawing from an ever-expanding list of types of data sources, using specific protocols for recording data, analyzing the information through multiple steps of analysis, and mentioning approaches for documenting the accuracy—or validity—of the data collected. This chapter addresses these important components of writing a good qualitative methods section into a proposal. Table 9.1 presents a checklist for reviewing the qualitative methods section of your proposal to determine whether you have addressed important topics.

Table 9.1 A Checklist of Questions for Designing a Qualitative Procedure

|  |   |
|--|---|
|  | Are the basic characteristics of qualitative studies mentioned?   |
|  | Is the specific type of qualitative design to be used in the study mentioned? Is the history of, a definition of, and applications for the design mentioned?  |
|  | Does the reader gain an understanding of the researcher's role in the study (past historical, social, cultural experiences, personal connections to sites and people, steps in gaining entry, and sensitive ethical issues) and how they may shape interpretations made in the study? |
|  | Is the purposeful sampling strategy for sites and individuals identified?   |
|  | Are the specific forms of data collection mentioned and a rationale given for their use?  |
|  | Are the procedures for recording information during the data collection detailed (such as protocols)?   |
|  | Are the data analysis steps identified?   |
|  | Is there evidence that the researcher has organized the data for analysis?  |
|  | Has the researcher reviewed the data generally to obtain a sense of the information?  |
|  | Has the researcher coded the data?  |
|  | Have the codes been developed to form a description and/or to identify themes?  |
|  | Are the themes interrelated to show a higher level of analysis and abstraction?   |
|  | Are the ways that the data will be represented mentioned—such as in tables, graphs, and figures?  |
|  | Have the bases for interpreting the analysis been specified (personal experiences, the literature, questions, action agenda)?   |
|  | Has the researcher mentioned the outcome of the study (developed a theory, provided a complex picture of themes)?   |
|  | Have multiple strategies been cited for validating the findings?  |

## THE COMPONENTS OF QUALITATIVE METHODS

The qualitative methods section of a proposal requires attention to topics that are similar to a quantitative (or mixed methods) project. These involve telling the reader about the design being used in the study and, in this case, the use of qualitative research and its basic intent. It also involves discussing the sample for the study and the overall data collection and recording procedures. It further expands on the data analysis steps and the methods used for presenting

the data, interpreting it, validating it, and indicating the potential outcomes of the study. In contrast to other designs, the qualitative approach includes comments by the researcher about their role, and the specific type of qualitative strategy being used. Further, because the writing structure of a qualitative project may vary considerably from study to study, the methods section should also include comments about the nature of the final written product. Recall that earlier in Chapter 4, in Examples 4.1 and 4.2, I provided an overview of the structure of a qualitative proposal that included these methods components.

## The Characteristics of Qualitative Research

For many years, proposal writers had to discuss the characteristics of qualitative research and convince faculty and audiences as to their legitimacy. Now these discussions are less frequently found in the literature and there is some consensus as to what constitutes qualitative inquiry. Thus, my suggestions about this section of a proposal are as follows:

- Review the needs of potential audiences for the proposal. Decide whether audience members are knowledgeable enough about the characteristics of qualitative research that this section is not necessary.
- If there is some question about their knowledge, present the basic characteristics of qualitative research in the proposal and possibly discuss a recent qualitative research journal article (or study) to use as an example to illustrate the characteristics.
- If you present the basic characteristics, what ones should you mention? Fortunately, there is some common agreement today about the core characteristics that define qualitative research. A number of authors of introductory texts convey these characteristics, such as Creswell (2013), Hatch (2002), and Marshall and Rossman (2011).
- *Natural setting*: Qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study. They do not bring individuals into a lab (a contrived situation), nor do they typically send out instruments for individuals to complete. This up-close information gathered by actually talking directly to people and seeing them behave and act within their context is a major characteristic of qualitative research. In the natural setting, the researchers have face-to-face interaction, often over time.
- *Researcher as key instrument*: Qualitative researchers collect data themselves through examining documents, observing behavior, or interviewing participants. They may use a protocol—an instrument for collecting data—but the researchers are the ones who actually gather the information. They do not tend to use or rely on questionnaires or instruments developed by other researchers.
- *Multiple sources of data*: Qualitative researchers typically gather multiple forms of data, such as interviews, observations, documents, and audiovisual information rather than rely on a single data source. Then the researchers review all of the data, make sense of it, and organize it into categories or themes that cut across all of the data sources.
- *Inductive and deductive data analysis*: Qualitative researchers build their patterns, categories, and themes from the bottom up by organizing the data into increasingly more abstract units of information. This inductive process illustrates working back and forth between the themes and the database until the researchers have established a comprehensive set of themes. Then deductively, the researchers look back at their data from the themes to determine if more evidence can support each theme or whether they need to gather additional information. Thus, while the process begins inductively, deductive thinking also plays an important role as the analysis moves forward.
- *Participants' meanings*: In the entire qualitative research process, the researcher keeps a focus on learning the meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research or that writers express in the literature.
- *Emergent design*: The research process for qualitative researchers is emergent. This means that the initial plan for research cannot be tightly prescribed, and some or all phases of the process may change or shift after the researcher enters the field and begins to collect data. For example, the questions may change, the forms of data collection may shift, and the individuals studied and the sites visited may be modified. The key idea behind qualitative research is to learn about the problem or issue from participants and to address the research to obtain that information.

- *Holistic account:* Qualitative researchers try to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges. A visual model of many facets of a process or a central phenomenon aids in establishing this holistic picture (see, for example, Creswell & Brown, 1992).

### Qualitative Designs

Beyond these general characteristics are more specific designs. These designs focus on data collection, analysis, and writing, but they originate out of disciplines and flow throughout the process of research (e.g., types of problems, ethical issues of importance). Many designs exist, such as the 28 approaches identified by Tesch (1990), the 22 types in Wolcott's (2009) tree, and the five traditions to qualitative inquiry by Creswell (2013). Marshall and Rossman (2011) discussed five types common across five different authors. As mentioned in Chapter 1, I recommend that qualitative researchers choose from among the possibilities, such as narrative, phenomenology, ethnography, case study, and grounded theory. I selected these five because they were popular across the social and health sciences today. Others exist that have been addressed adequately in qualitative books, such as participatory action research (Kemmis & Wilkinson, 1998) or discourse analysis (Cheek, 2004). In the designs, researchers might study individuals (narrative, phenomenology); explore processes, activities, and events (case study, grounded theory); or learn about broad culture-sharing behavior of individuals or groups (ethnography).

In writing a procedure for a qualitative proposal, consider the following research tips:

- Identify the specific design that you will be using and provide references to the literature that discusses the approach.
- Provide some background information about the design, such as its discipline origin, the applications of it (preferably to your field), and a brief definition of it (see Chapter 1 for the five designs).
- Discuss why it is an appropriate strategy to use in the proposed study.
- Identify how the use of the design will shape many aspects of the design process, such as the title, the problem, the research questions, the data collection and analysis and report write-up.

### The Researcher's Role

As mentioned in the list of characteristics, qualitative research is interpretative research; the inquirer is typically involved in a sustained and intensive experience with participants. This introduces a range of strategic, ethical, and personal issues into the qualitative research process (Locke, Spirduso, & Silverman, 2013). With these concerns in mind, inquirers explicitly identify reflexively their biases, values, and personal background, such as gender, history, culture, and socioeconomic status (SES) that shape their interpretations formed during a study. In addition, gaining entry to a research site and the ethical issues that might arise are also elements of the researcher's role.

- Include statements about past experiences with the research problem or with the participants or setting that help the reader understand the connection between the researchers and the study. These experiences may involve participation in the setting, past educational or work experiences, or culture, ethnicity, race, SES, or other demographics that tie the researchers directly to the study.
- Be explicit, then, about how these experiences may potentially shape the interpretations the researchers make during the study. For example, the experiences may cause researchers to lean toward certain themes, to actively look for evidence to support their positions, and to create favorable or unfavorable conclusions about the sites or participants.
- Comment on connections between the researchers and the participants and on the research sites that may unduly influence the researchers' interpretations. "Backyard" research (Glesne & Peshkin, 1992) involves studying researchers own organization, or friends, or immediate work setting. This often leads to compromises in the researchers' ability to disclose information and raises issues of an imbalance of power between the inquirers and the participants. When researchers collect data at their own workplace (or when they are in a superior role to participants), the information may

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of convenience and easy to collect, but it may not be accurate information and may jeopardize the roles of the researchers and the participants. If studying the backyard is essential, then researchers hold the responsibility for showing how the data will not be compromised and how such information will not place the participants (or the researchers) at risk. In addition, multiple strategies for validation are necessary to demonstrate the accuracy of the information.

- Indicate steps taken to obtain permission from the institutional review board (IRB) (see Chapter 4) to protect the rights of human participants. Attach, as an appendix, the approval letter from the IRB and discuss the process involved in securing permissions.

- Discuss steps taken to gain entry to the setting and to secure permissions to study the participants or situation (Marshall & Rossman, 2011). It is important to gain access to research or archival sites by seeking the approval of **gatekeepers**, individuals at the site who provide access to the site and allow or permit the research to be done. A brief proposal might need to be developed and submitted for review to gatekeepers. Bogdan and Biklen (1992) advanced topics that could be addressed in such a proposal:

- Why was the site chosen for study?
- What activities will occur at the site during the research study?
- Will the study be disruptive?
- How will the results be reported?
- What will the gatekeeper gain from the study?

- Comment about sensitive ethical issues that may arise (see Chapter 3). For each issue raised, discuss how the research study will address it. For example, when studying a sensitive topic, it is necessary to mask names of people, places, and activities. In this situation, the process for masking information requires discussion in the proposal.

## Data Collection Procedures

Comments about the role of the researcher set the stage for discussion of issues involved in collecting data. The data collection steps include setting the boundaries for the study, collecting information through unstructured or semi-structured observations and interviews, documents, and visual materials, as well as establishing the protocol for recording information.

- Identify the *purposefully selected* sites or individuals for the proposed study. The idea behind qualitative research is to **purposefully select** participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question. This does not necessarily suggest random sampling or selection of a large number of participants and sites, as typically found in quantitative research. A discussion about participants and site might include four aspects identified by Miles and Huberman (1994): (a) the setting (i.e., where the research will take place), (b) the actors (i.e., who will be observed or interviewed), (c) the events (i.e., what the actors will be observed or interviewed doing), and (d) the process (i.e., the evolving nature of events undertaken by the actors within the setting).

- A related topic would be the number of sites and participants to be involved in your study. Aside from the small number that characterizes qualitative research, how many sites and participants should you have? First of all, there is no specific answer to this question; although I have taken the position (Creswell, 2013) that sample size depends on the qualitative design being used (e.g., ethnography, case study). From my review of many qualitative research studies I have found narrative research to include one or two individuals; phenomenology to typically range from three to ten; grounded theory, twenty to thirty; ethnography to examine one single culture-sharing group with numerous artifacts, interviews, and observations; and case studies to include about four to five cases. This is certainly one approach to the sample size issue. Another approach is equally viable. The idea of **saturation** comes from grounded theory. Charmaz (2006) said that you stop collecting data when the categories (or themes) are saturated: when gathering fresh data no longer sparks new insights or reveals new properties.

- Indicate the type or types of data to be collected. In many qualitative studies, inquirers collect multiple forms of data and spend a considerable time in the natural setting gathering information. The collection procedures in qualitative research involve four basic types and their strengths and limitations, as shown in Table 9.2.

- A **qualitative observation** is when the researcher takes field notes on the behavior and activities of individuals at the research site. In these field notes, the researcher records, in an unstructured or semistructured way (using some prior questions that the inquirer wants to know), activities at the research site. Qualitative observers may

- In **qualitative interviews**, the researcher conducts face-to-face interviews with participants, telephone interviews, or engages in focus group interviews with six to eight interviewees in each group. These interviews involve unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants.
- During the process of research, the investigator may collect **qualitative documents**. These may be public documents (e.g., newspapers, minutes of meetings, official reports) or private documents (e.g., personal journals and diaries, letters, e-mails).
- A final category of qualitative data consists of **qualitative audio and visual materials**. This data may take the form of photographs, art objects, videotapes, website main pages, e-mails, text messages, social media text, or any forms of sound. Include creative data collection procedures that fall under the category of visual ethnography (Pink, 2001) and which might include living stories, metaphorical visual narratives, and digital archives (Clandinin, 2007).
- In a discussion about data collection forms, be specific about the types and include arguments concerning the strengths and weaknesses of each type, as discussed in Table 9.2.
- Include data collection types that go beyond typical observations and interviews. These unusual forms create reader interest in a proposal and can capture useful information that observations and interviews may miss. For example, examine the compendium of types of data in Table 9.3 that can be used, to stretch the imagination about possibilities, such as gathering sounds or tastes, or using cherished items to elicit comments during an interview.

Table 9.2 Qualitative Data Collection Types, Options, Advantages, and Limitations

| Data Collection Types | Options Within Types  | Advantages of the Type  | Limitations of the Type  |
|-----------------------|---|---|--|
| Observations          | <ul style="list-style-type: none"> <li>• Complete participant—researcher conceals role</li> <li>• Observer as participant—role of researcher is known</li> <li>• Participant as observer—observation role secondary to participant role</li> <li>• Complete observer—researcher observes without participating</li> </ul> | <ul style="list-style-type: none"> <li>• Researcher has a firsthand experience with participant.</li> <li>• Researcher can record information as it occurs.</li> <li>• Unusual aspects can be noticed during observation.</li> <li>• Useful in exploring topics that may be uncomfortable for participants to discuss.</li> </ul> | <ul style="list-style-type: none"> <li>• Researcher may be seen as intrusive.</li> <li>• Private information may be observed that researcher cannot report.</li> <li>• Researcher may not have good attending and observing skills.</li> <li>• Certain participants (e.g., children) may present special problems in gaining rapport.</li> </ul> |
| Interviews            | <ul style="list-style-type: none"> <li>• Face-to-face—one-on-one, in-person interview</li> <li>• Telephone—researcher interviews by phone</li> <li>• Focus group—researcher interviews participants in a group</li> <li>• E-mail Internet interview</li> </ul>  | <ul style="list-style-type: none"> <li>• Useful when participants cannot be directly observed.</li> <li>• Participants can provide historical information.</li> <li>• Allows researcher control over the line of questioning.</li> </ul>  | <ul style="list-style-type: none"> <li>• Provides indirect information filtered through the views of interviewees.</li> <li>• Provides information in a designated place rather than the natural field setting.</li> <li>• Researcher's presence may bias responses.</li> <li>• Not all people are equally articulate and perceptive.</li> </ul> |
| Documents             | <ul style="list-style-type: none"> <li>• Public documents—minutes of meetings or newspapers</li> <li>• Private documents—journals, diaries, or letters</li> </ul>   | <ul style="list-style-type: none"> <li>• Enables a researcher to obtain the language and words of participants.</li> <li>• Can be accessed at a</li> </ul>  | <ul style="list-style-type: none"> <li>• Not all people are equally articulate and perceptive.</li> <li>• May be protected information unavailable to public or private access.</li> </ul>   |

|                        |   |  |   |
|------------------------|---|--|---|
|                        |   | <ul style="list-style-type: none"> <li>• Time convenient to researcher—an unobtrusive source of information.</li> <li>• Represents data to which participants have given attention.</li> <li>• As written evidence, it saves a researcher the time and expense of transcribing.</li> </ul> | <ul style="list-style-type: none"> <li>• Requires the researcher to search out the information in hard-to-find places.</li> <li>• Requires transcribing or optically scanning for computer entry.</li> <li>• Materials may be incomplete.</li> <li>• The documents may not be authentic or accurate.</li> </ul> |
| Audio-Visual Materials | <ul style="list-style-type: none"> <li>• Photographs</li> <li>• Videotapes</li> <li>• Art objects</li> <li>• Computer messages</li> <li>• Sounds</li> <li>• Film</li> </ul> | <ul style="list-style-type: none"> <li>• May be an unobtrusive method of collecting data.</li> <li>• Provides an opportunity for participants to directly share their reality.</li> <li>• It is creative in that it captures attention visually.</li> </ul>                                | <ul style="list-style-type: none"> <li>• May be difficult to interpret.</li> <li>• May not be accessible publicly or privately.</li> <li>• The presence of an observer (e.g., photographer) may be disruptive and affect responses.</li> </ul>  |

NOTE: This table includes material adapted from Bogdan & Biklen (1992), Creswell (2013), and Merriam (1998).

Table 9.3 A List of Qualitative Data Collection Approaches

|   |
|---|
| <p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• Gather field notes by conducting an observation as a participant.</li> <li>• Gather field notes by conducting an observation as an observer.</li> <li>• Gather field notes by spending more time as a participant than as an observer.</li> <li>• Gather field notes by spending more time as an observer than as a participant.</li> <li>• Gather field notes first by observing as a “participant-outsider” and then moving into the setting and observing as a “participant-insider.”</li> </ul>                                 |
| <p><b>Interviews</b></p> <ul style="list-style-type: none"> <li>• Conduct an unstructured, open-ended interview and take interview notes.</li> <li>• Conduct an unstructured, open-ended interview; audiotape the interview; and transcribe it.</li> <li>• Conduct a semistructured interview, audiotape the interview, and transcribe the interview.</li> <li>• Conduct a focus group interview, audiotape the interview, and transcribe it.</li> <li>• Conduct different types of interviews: e-mail or Internet, face-to-face, focus group, online focus group, and telephone interviews.</li> </ul> |
| <p><b>Documents</b></p> <ul style="list-style-type: none"> <li>• Keep a journal during the research study.</li> <li>• Have a participant keep a journal or diary during the research study.</li> <li>• Collect personal letters from participants.</li> <li>• Analyze public documents (e.g., official memos, minutes, records, archival material).</li> </ul>  |

- Conduct chart audits.
- Review medical records.

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### Audiovisual Materials

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- Examine photographs or videotapes.
  - Have participants take photographs or videotapes (i.e., photo elicitation), and then interview them about the materials.
  - Examine physical trace evidence (e.g., footprints in the snow).
  - Videotape or film a social situation or an individual or group.
  - Examine website main pages.
  - Collect sounds (e.g., musical sounds, a child's laughter, car horns honking).
  - Collect e-mail messages, discussion board messages (e.g., Facebook), or other forms of social media messages.
  - Collect cell phone text messages (e.g., Twitter).
  - Examine possessions or ritual objects.
  - Collect sounds, smells, tastes, or any stimuli of the senses.
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SOURCE: Adapted from Creswell (2013).

### Data Recording Procedures

Before entering the field, qualitative researchers plan their approach to data recording. The proposal should identify what data the researcher will record and the procedures for recording data.

- Plan to develop and use a protocol for recording observations in a qualitative study. Researchers often engage in multiple observations during the course of a qualitative study and use an **observational protocol** for recording information while observing. This may be a single page with a dividing line down the middle to separate descriptive notes (portraits of the participants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events, or activities) from reflective notes (the researcher's personal thoughts, such as "speculation, feelings, problems, ideas, hunches, impressions, and prejudices" Bogdan & Biklen, 1992, p. 121). Also written on this form might be demographic information about the time, place, and date of the field setting where the observation takes place.

- Plan to develop and use an **interview protocol** for asking questions and recording answers during a qualitative interview. Researchers record information from interviews by making handwritten notes, by audiotaping, or by videotaping. Even if an interview is taped, I recommend that researchers take notes in the event that recording equipment fails. If audiotaping is used, researchers need to plan in advance for the transcription of the tape. The interview protocol needs to include the following components:

- A heading (date, place, interviewer, interviewee)
- Instructions for the interviewer to follow so that standard procedures are used from one interview to another
- The questions (typically an ice-breaker question at the beginning followed by four to five questions that are often the subquestions in a qualitative research plan, followed by some concluding statement or a question, such as, "Who should I visit with to learn more about my questions?")
- Probes for the four to five questions, to follow up and ask individuals to explain their ideas in more detail, or to elaborate on what they have said
- Spaces between the questions to record responses
- A final thank-you statement to acknowledge the time the interviewee spent during the interview
- Researchers typically develop a log to keep a record of documents collected for analysis in a qualitative study. In a proposal for a study, it is helpful to note in this log whether the information represents primary material (i.e., information directly from the people or situation under study) or secondary material (i.e., secondhand accounts of the people or situation written by others). It is also helpful to comment on the reliability and value of the data sources. For visual materials, some form of system is needed to organize the materials so that they can be easily retrieved. A log kept by the researchers would work equally well for this form of data.

### Data Analysis and Interpretation



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A thorough discussion in a qualitative proposal needs also to specify the steps in analyzing the various forms of qualitative data. In general, the intent is to make sense out of text and image data. It involves segmenting and taking apart the data (like Peeling back the layers of an onion) as well as putting it back together. The discussion in your proposal about qualitative data analysis might begin with several general points about the overall process:

- Data analysis in qualitative research will proceed hand-in-hand with other parts of developing the qualitative study, namely, the data collection and the write-up of findings. While interviews are going on, for example, researchers may be analyzing an interview collected earlier, writing memos that may ultimately be included as a narrative in the final report, and organizing the structure of the final report. This process is unlike quantitative research in which the investigator collects the data, then analyzes the information, and finally writes the report.

- Because text and image data are so dense and rich, not all of the information can be used in a qualitative study. Thus, in the analysis of the data, researchers need to “winnow” the data (Guest, MacQueen, & Namey, 2012), a process of focusing in on some of the data and disregarding other parts of it. This process, too, is different from quantitative research in which researchers go to great lengths to preserve all of the data and reconstruct or replace missing data. In qualitative research, the impact of this process is to aggregate data into a small number of themes, something like five to seven themes (Creswell, 2013).

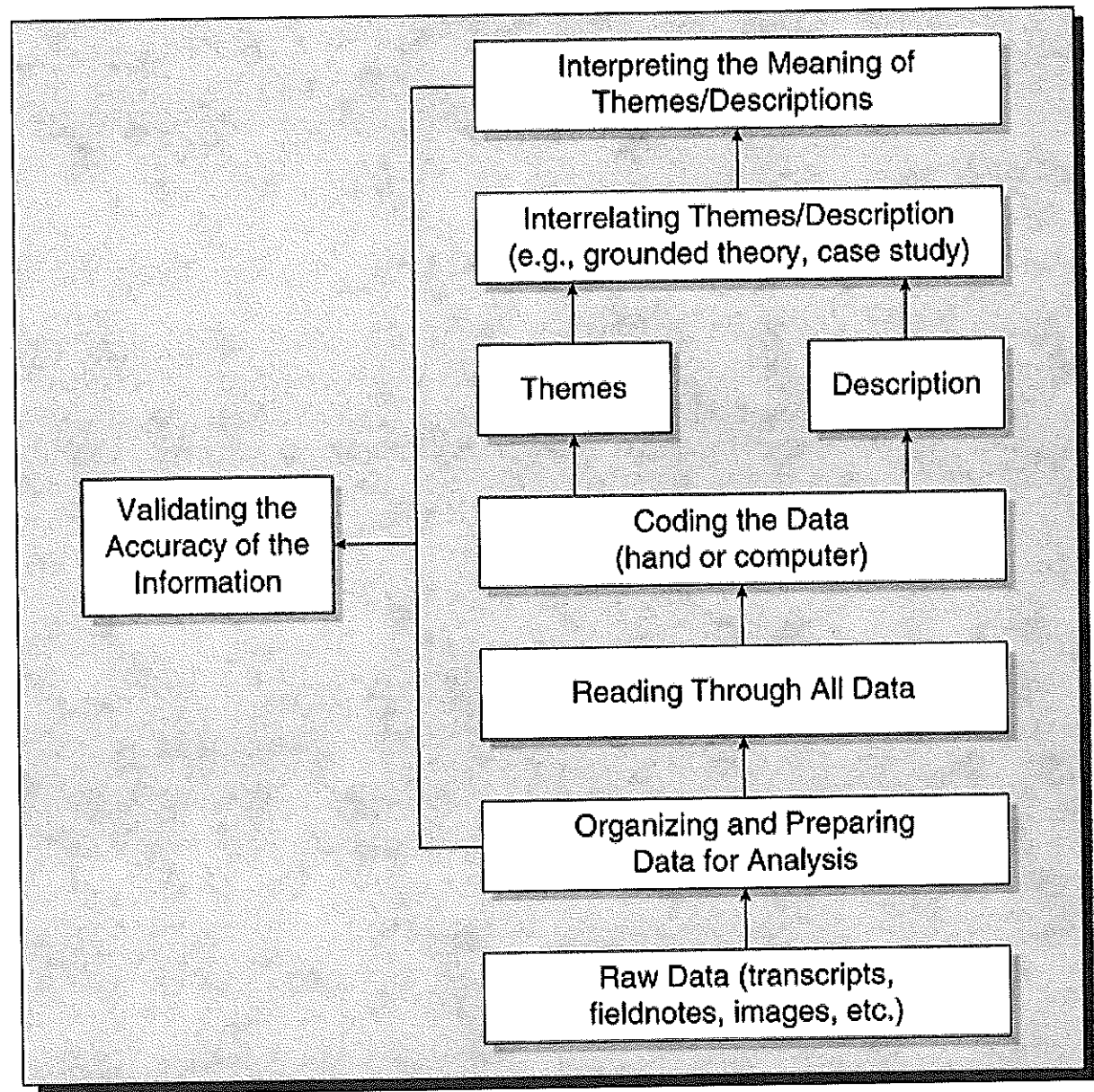
- Also specify whether you will use a qualitative computer data analysis program to assist you in analyzing the data (or whether you will hand code the data). Hand coding is a laborious and time-consuming process, even for data from a few individuals. Thus, qualitative software programs have become quite popular, and they help researchers organize, sort, and search for information in text or image databases (see Guest and colleagues’ [2012] chapter on qualitative data analysis software). Several excellent computer software programs are available, and they have similar features: good tutorials and demonstration files, the ability to incorporate both text and image (e.g., photographs) data, the features of storing and organizing data, the search capacity of locating all text associated with specific codes, interrelated codes for making queries of the relationship among codes, and the import and export of qualitative data to *quantitative* programs, such as spreadsheets or data analysis programs. The basic idea behind these programs is that using the computer is an efficient means for storing and locating qualitative data. Although the researcher still needs to go through each line of text (as in hand coding by going through transcriptions) and assign codes, this process may be faster and more efficient than hand coding. Also, in large databases, the researcher can quickly locate all passages (or text segments) coded the same and determine whether participants are responding to a code idea in similar or different ways. Beyond this, the computer program can facilitate comparing different codes (e.g., How do males and females—the first code of *gender*—differ in terms of their *attitudes to smoking*—a second code?). These are just a few features of the software programs that make them a logical choice for qualitative data analysis over hand coding. As with any software program, qualitative software programs require time and skill to learn and employ effectively, although books for learning the programs are widely available. Demos are available for three popular qualitative data analysis software programs MAXqda ([www.maxqda.com/](http://www.maxqda.com/)), Atlas.ti ([www.atlasti.com/](http://www.atlasti.com/)), and QSR NVivo ([www.qsrinternational.com/](http://www.qsrinternational.com/)). The first two programs were developed in Germany and the third in Australia. These programs are available to work on a PC or MAC.

- A helpful conceptualization to advance in the methods section is that qualitative data analysis will proceed on two levels: (a) the first is the more general procedure in analyzing the data (see below), and (b) the second would be the analysis steps embedded within specific qualitative designs. For example, narrative research employs restorying the participants’ stories using structural devices, such as plot, setting, activities, climax, and denouement (Clandinin & Connelly, 2000). Phenomenological research uses the analysis of significant statements, the generation of meaning units, and the development of what Moustakas (1994) called an essence description. Grounded theory has systematic steps (Corbin & Strauss, 2007; Strauss & Corbin, 1990, 1998). These involve generating categories of information (open coding), selecting one of the categories and positioning it within a theoretical model (axial coding), and then explicating a story from the interconnection of these categories (selective coding). Case study and ethnographic research involve a detailed description of the setting or individuals, followed by analysis of the data for themes or issues (see Stake, 1995; Wolcott, 1994). A complete description of the data analysis in a proposal, when the inquirer is using one of these strategies, would be to first describe the general process of analysis followed by the specific steps within the strategy.

- Despite these analytic differences depending on the type of strategy used, qualitative inquirers often use a general procedure and convey in the proposal the steps in data analysis. An ideal situation is to blend the general steps with the specific research strategy steps. An overview of the data analysis process is seen in Figure 9.1. As a research tip, I urge

This figure suggests a linear, hierarchical approach building from the bottom to the top, but I see it as more interactive in practice; the various stages are interrelated and not always visited in the order presented. I would suggest that you advance these seven steps in your methods section of your proposal and give concrete illustrations of potential codes and themes that might emerge in your study.

Figure 9.1 Data Analysis in Qualitative Research



Step 1. Organize and prepare the data for analysis. This involves transcribing interviews, optically scanning material, typing up field notes, cataloguing all of the visual material, and sorting and arranging the data into different types depending on the sources of information.

Step 2. Read or look at all the data. This first step provides a general sense of the information and an opportunity to reflect on its overall meaning. What general ideas are participants saying? What is the tone of the ideas? What is the impression of the overall depth, credibility, and use of the information? Sometimes qualitative researchers write notes in margins of transcripts or observational field notes, or start recording general thoughts about the data at this stage. For visual data, a sketchbook of ideas can begin to take shape.

Step 3. Start **coding** all of the data. Coding is the process of organizing the data by bracketing chunks (or text or image segments) and writing a word representing a category in the margins (Rossman & Rallis, 2012). It involves taking text data or pictures gathered during data collection, segmenting sentences (or paragraphs) or images into

Table 9.4 Tesch's Eight Steps in the Coding Process

1. Get a sense of the whole. Read all the transcriptions carefully. Perhaps jot down some ideas as they come to mind as you read.
2. Pick one document (i.e., one interview)—the most interesting one, the shortest, the one on the top of the pile. Go through it, asking yourself, "What is this about?" Do not think about the substance of the information but its underlying meaning. Write thoughts in the margin.
3. When you have completed this task for several participants, make a list of all topics. Cluster together similar topics. Form these topics into columns, perhaps arrayed as major, unique, and leftover topics.
4. Now take this list and go back to your data. Abbreviate the topics as codes and write the codes next to the appropriate segments of the text. Try this preliminary organizing scheme to see if new categories and codes emerge.
5. Find the most descriptive wording for your topics and turn them into categories. Look for ways of reducing your total list of categories by grouping topics that relate to each other. Perhaps draw lines between your categories to show interrelationships.
6. Make a final decision on the abbreviation for each category and alphabetize these codes.
7. Assemble the data material belonging to each category in one place and perform a preliminary analysis.
8. If necessary, recode your existing data. (pp. 142–149)

In addition, give some attention to the types of codes to develop when analyzing a text transcript or a picture (or other type of visual object). I tend to think about codes as falling into three categories:

- Codes on topics that readers would expect to find, based on the past literature and common sense. When studying bullying in the schools, I might code some segments as "attitudes toward oneself." This code would be expected in a study about bullying in the schools.
- Codes that are surprising and that were not anticipated at the beginning of the study. In a study of leadership in nonprofit organizations, I might learn about the impact of geo-warming on the building of the organization and how this shapes the location and proximity of individuals to one another. Without going out to the building before the study begins and looking at it, I would not necessarily think about the codes of geo-warming and location of offices in my study of leadership.
- Codes that are unusual, and that are, in and of themselves, of conceptual interest to readers. I will use one of the codes that we discovered in our qualitative study of a campus' response to a gunman (Asmussen & Creswell, 1995). We did not anticipate the code "retriggering" to emerge in our study, and it surfaced from the perspective of a psychologist called into the campus to assess the response. The fact that individuals were reminded of past traumatic incidents—retriggering—prompted us to use the term as an important code and ultimately a theme in our analysis.

One further issue about coding is whether the researcher should (a) develop codes *only* on the basis of the emerging information collected from participants, (b) use predetermined codes and then fit the data to them, or (c) use some combination of emerging and predetermined codes. The traditional approach in the social sciences is to allow the codes to emerge during the data analysis. In the health sciences, a popular approach is to use predetermined codes based on the theory being examined. In this case, the researchers might develop a **qualitative codebook**, a table that contains a list of predetermined codes that researchers use for coding the data. Guest and colleagues (2012) discussed and illustrated the use of codebooks in qualitative research. The intent of a codebook is to provide definitions for codes and to maximize coherence among codes—especially when multiple coders are involved. This codebook would provide a list of codes, a code label for each code, a brief definition of it, a full definition of it, information about when to use the code and when not to use it, and an example of a quote illustrating the code. This codebook can evolve and change during a study based on close analysis of the data when the researcher is not starting from an emerging code perspective. For researchers who have a distinct theory they want to test in their projects, I would recommend that a preliminary codebook be developed for coding the data and permit the codebook to develop and change based on the information learned during the data analysis.

Step 4. Use the coding process to generate a description of the setting or people as well as categories or themes for analysis. *Description* involves a detailed rendering of information about people, places, or events in a setting.

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Researchers can generate codes for this description. This analysis is useful in designing detailed descriptions for case studies, ethnographies, and narrative research projects. Use the coding as well for generating a small number of themes or categories—perhaps five to seven themes for a research study. These themes are the ones that appear as major findings in qualitative studies and are often used as headings in the findings sections (or in the findings section of a dissertation or thesis) of studies. They should display multiple perspectives from individuals and be supported by diverse quotations and specific evidence.

Beyond identifying the themes during the coding process, qualitative researchers can do much with themes to build additional layers of complex analysis. For example, researchers interconnect themes into a story line (as in narratives) or develop them into a theoretical model (as in grounded theory). Themes are analyzed for each individual case and across different cases (as in case studies) or shaped into a general description (as in phenomenology). Sophisticated qualitative studies go beyond description and theme identification and form complex theme connections.

Step 5. Advance how the description and themes will be *represented* in the qualitative narrative. The most popular approach is to use a narrative passage to convey the findings of the analysis. This might be a discussion that mentions a chronology of events, the detailed discussion of several themes (complete with subthemes, specific illustrations, multiple perspectives from individuals, and quotations) or a discussion with interconnecting themes. Many qualitative researchers also use visuals, figures, or tables as adjuncts to the discussions. They present a process model (as in grounded theory), advance a drawing of the specific research site (as in ethnography), or convey descriptive information about each participant in a table (as in case studies and ethnographies).

Step 6. A final step in data analysis involves making an **interpretation in qualitative research** of the findings or results. Asking, “What were the lessons learned?” captures the essence of this idea (Lincoln & Guba, 1985). These lessons could be the researcher’s personal interpretation, couched in the understanding that the inquirer brings to the study from a personal culture, history, and experiences. It could also be a meaning derived from a comparison of the findings with information gleaned from the literature or theories. In this way, authors suggest that the findings confirm past information or diverge from it. It can also suggest new questions that need to be asked—questions raised by the data and analysis that the inquirer had not foreseen earlier in the study. Ethnographers can end a study, Wolcott (1994) said, by stating further questions. The questioning approach is also used in transformative approaches to qualitative research. Moreover, when qualitative researchers use a theoretical lens, they can form interpretations that call for action agendas for reform and change. Researchers might describe how the narrative outcome will be compared with theories and the general literature on the topic. In many qualitative articles, researchers also discuss the literature at the end of the study (see the discussion in Chapter 2). Thus, interpretation in qualitative research can take many forms; be adapted for different types of designs; and be flexible to convey personal, research-based, and action meanings.

## Validity and Reliability

Although validation of findings occurs throughout the steps in the process of research (as shown in Figure 9.1), this discussion focuses on it to enable a researcher to write a passage into a proposal on the procedures for validating the findings that will be undertaken in a study. Proposal developers need to convey the steps they will take in their studies to check for the accuracy and credibility of their findings. Validity does not carry the same connotations in qualitative research as it does in quantitative research; nor is it a companion of reliability (examining stability) or generalizability (the external validity of applying results to new settings, people, or samples; both are discussed in Chapter 8). **Qualitative validity** means that the researcher checks for the accuracy of the findings by employing certain procedures, while **qualitative reliability** indicates that the researcher’s approach is consistent across different researchers and different projects (Gibbs, 2007).

Validity is one of the strengths of qualitative research and is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account (Creswell & Miller, 2000). Terms abound in the qualitative literature that address validity, such as *trustworthiness*, *authenticity*, and *credibility* (Creswell & Miller, 2000), and it is a much-discussed topic (Lincoln, Lynham, & Guba, 2011).

A procedural perspective that I recommend for research proposals is to identify and discuss one or more strategies available to check the accuracy of the findings. The researcher actively incorporates **validity strategies** into their proposal. I recommend the use of multiple approaches, and these should enhance the researcher’s ability to assess the accuracy of findings as well as convince readers of that accuracy. There are eight primary strategies, organized from those most frequently used and easy to implement to those occasionally used and more difficult to implement:

- coherent justification for themes. If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study.
- Use *member checking* to determine the accuracy of the qualitative findings through taking the final report or specific descriptions or themes back to participants and determining whether these participants feel that they are accurate. This does not mean taking back the raw transcripts to check for accuracy; instead, the researcher takes back parts of the polished or semi-polished product, such as the major findings, the themes, the case analysis, the grounded theory, the cultural description, and so forth. This procedure can involve conducting a follow-up interview with participants in the study and providing an opportunity for them to comment on the findings.
- Use a *rich, thick description* to convey the findings. This description may transport readers to the setting and give the discussion an element of shared experiences. When qualitative researchers provide detailed descriptions of the setting, for example, or offer many perspectives about a theme, the results become more realistic and richer. This procedure can add to the validity of the findings.
- Clarify the *bias* the researcher brings to the study. This self-reflection creates an open and honest narrative that will resonate well with readers. Reflectivity has already been mentioned as a core characteristic of qualitative research. Good qualitative research contains comments by the researchers about how their interpretation of the findings is shaped by their background, such as their gender, culture, history, and socioeconomic origin.
- Also present *negative or discrepant information* that runs counter to the themes. Because real life is composed of different perspectives that do not always coalesce, discussing contrary information adds to the credibility of an account. A researcher can accomplish this by discussing evidence about a theme. Most evidence will build a case for the theme; researchers can also present information that contradicts the general perspective of the theme. By presenting this contradictory evidence, the account becomes more realistic and more valid.
- Spend *prolonged time* in the field. In this way, the researcher develops an in-depth understanding of the phenomenon under study and can convey detail about the site and the people that lends credibility to the narrative account. The more experience that a researcher has with participants in their settings, the more accurate or valid will be the findings.
- Use *peer debriefing* to enhance the accuracy of the account. This process involves locating a person (a peer debriefer) who reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher. This strategy—involving an interpretation beyond the researcher and invested in another person—adds validity to an account.
- Use an *external auditor* to review the entire project. As distinct from a peer debriefer, this auditor is not familiar with the researcher or the project and can provide an objective assessment of the project throughout the process of research or at the conclusion of the study. The role is similar to that of a fiscal auditor, and specific questions exist that auditors might ask (Lincoln & Guba, 1985). The procedure of having an independent investigator look over many aspects of the project (e.g., accuracy of transcription, the relationship between the research questions and the data, the level of data analysis from the raw data through interpretation) enhances the overall validity of a qualitative study.

How do qualitative researchers check to determine if their approaches are reliable (i.e., consistent or stable)? Yin (2009) suggested that qualitative researchers need to document the procedures of their case studies and to document as many of the steps of the procedures as possible. He also recommended setting up a detailed case study protocol and database, so that others can follow the procedures. Gibbs (2007) suggested several qualitative reliability procedures:

- Check transcripts to make sure that they do not contain obvious mistakes made during transcription.
- Make sure that there is not a drift in the definition of codes, a shift in the meaning of the codes during the process of coding. This can be accomplished by constantly comparing data with the codes and by writing memos about the codes and their definitions (see the discussion on a qualitative codebook).
- For team research, coordinate the communication among the coders by regular documented meetings and by sharing the analysis.
- Cross-check codes developed by different researchers by comparing results that are independently derived. Proposal writers need to include several of these procedures as evidence that they will have consistent results in their proposed study. I recommend that several procedures be mentioned in a proposal and that single researchers find another person who can cross-check their codes for what is called **intercoder agreement** (or cross-checking) (also see Guest et al., 2012). Such an agreement might be based on whether two or more coders agree on codes used for the same passages

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At the least, it is not that they code the same passage of text but whether another coder would code it with the same or a similar code. Reliability subprograms in qualitative computer software packages can then be used to determine the level of consistency of coding. Miles and Huberman (1994) recommended that the consistency of the coding be in agreement at least 80% of the time for good qualitative reliability.

**Qualitative generalization** is a term that is used in a limited way in qualitative research, since the intent of this form of inquiry is not to generalize findings to individuals, sites, or places outside of those under study (see Gibbs, 2007, for his cautionary note about qualitative generalizability). In fact, the value of qualitative research lies in the particular description and themes developed in context of a specific site. Particularity rather than generalizability (Greene & Caracelli, 1997) is the hallmark of good qualitative research. However, there are a few discussions in the qualitative literature about generalizability, especially as applied to case study research in which the inquirer studies several cases. Yin (2009), for example, felt that qualitative case study results can be generalized to some broader theory. The generalization occurs when qualitative researchers study additional cases and generalize findings to the new cases. It is the same as the replication logic used in experimental research. However, to repeat a case study's findings in a new case setting requires good documentation of qualitative procedures, such as a protocol for documenting the problem in detail and the development of a thorough case study database.

## WRITING THE QUALITATIVE REPORT

A plan for qualitative methods should end with some comments about the narrative that will emerge from the data analysis. Numerous varieties of narratives exist, and examples from scholarly journals illustrate these models. In a plan for a study, consider advancing several points about the narrative.

- The basic procedure in reporting the results of a qualitative study are to develop descriptions and themes from the data (see Figure 9.1), to present these descriptions and themes that convey multiple perspectives from participants and detailed descriptions of the setting or individuals. Using a qualitative strategy of inquiry, these results may also provide a chronological narrative of an individual's life (narrative research), a detailed description of their experiences (phenomenology), a theory generated from the data (grounded theory), a detailed portrait of a culture-sharing group (ethnography), or an in-depth analysis of one or more cases (case study).
- Given these different strategies, the findings and interpretation sections of a plan for a study might discuss how the sections will be presented: as objective accounts, fieldwork experiences (Van Maanen, 1988), a chronology, a process model, an extended story, an analysis by cases or across cases, or a detailed descriptive portrait.
- At the specific level, there might be some comment in the proposal about writing strategies that will be used to convey the qualitative research. These might include the following:
  - Quotes: From short to long embedded passages
  - Dialogue that reflects the culture of participants, their language, and a sensitivity to their culture or ethnicity, and the interweaving of words from participants and the author's interpretations
  - Varied narrative forms, such as matrices, comparison tables, diagrams
  - First person "I" or collective "we" pronouns in the narration
  - Metaphors and analogies (see, for example, Richardson, 1990)
  - Narrative forms associated with specific qualitative strategies (e.g., description in case studies and ethnographies, a detailed story in narrative research)

The following is an example of a complete qualitative methods section that was included in a proposal by Miller (1992). It contains most of the topics for a good qualitative methods section addressed in this chapter.

### Example 9.1 Qualitative Procedures

Miller's project was an ethnographic study of first-year experiences of the president of a 4-year college. As I present this discussion, I refer back to the sections addressed in this chapter and highlight them in boldfaced type. Also, I have maintained Miller's use of the term *informant*, although today, the more appropriate term *participant* should be used.

## The Qualitative Research Paradigm

The qualitative research paradigm has its roots in cultural anthropology and American sociology (Kirk & Miller, 1986). It has only recently been adopted by educational researchers (Borg & Gall, 1989). The intent of qualitative research is to understand a particular social situation, event, role, group, or interaction (Locke, Spirduso, & Silverman, 1987). It is largely an investigative process where the researcher gradually makes sense of a social phenomenon by contrasting, comparing, replicating, cataloguing and classifying the object of study (Miles & Huberman, 1984). Marshall and Rossman (1989) suggest that this entails immersion in the everyday life of the setting chosen for the study; the researcher enters the informants' world and through ongoing interaction, seeks the informants' perspectives and meanings. *[Qualitative assumptions are mentioned.]*

Scholars contend that qualitative research can be distinguished from quantitative methodology by numerous unique characteristics that are inherent in the design. The following is a synthesis of commonly articulated assumptions regarding characteristics presented by various researchers.

1. Qualitative research occurs in natural settings, where human behavior and events occur.
2. Qualitative research is based on assumptions that are very different from quantitative designs. Theory or hypotheses are not established a priori.
3. The researcher is the primary instrument in data collection rather than some inanimate mechanism (Eisner, 1991; Frankel & Wallen, 1990; Lincoln & Guba, 1985; Merriam, 1988).
4. The data that emerge from a qualitative study are descriptive. That is, data are reported in words (primarily the participant's words) or pictures, rather than in numbers (Fraenkel & Wallen, 1990; Locke et al., 1987; Marshall & Rossman, 1989; Merriam, 1988).
5. The focus of qualitative research is on participants' perceptions and experiences, and the way they make sense of their lives (Fraenkel & Wallen, 1990; Locke et al., 1987; Merriam, 1988). The attempt is therefore to understand not one, but multiple realities (Lincoln & Guba, 1985).
6. Qualitative research focuses on the process that is occurring as well as the product or outcome. Researchers are particularly interested in understanding how things occur (Fraenkel & Wallen, 1990; Merriam, 1988).
7. Idiographic interpretation is utilized. In other words, attention is paid to particulars; and data is interpreted in regard to the particulars of a case rather than generalizations.
8. Qualitative research is an emergent design in its negotiated outcomes. Meanings and interpretations are negotiated with human data sources because it is the subjects' realities that the researcher attempts to reconstruct (Lincoln & Guba, 1985; Merriam, 1988).
9. This research tradition relies on the utilization of tacit knowledge (intuitive and felt knowledge) because often the nuances of the multiple realities can be appreciated most in this way (Lincoln & Guba, 1985). Therefore, data are not quantifiable in the traditional sense of the word.
10. Objectivity and truthfulness are critical to both research traditions. However, the criteria for judging a qualitative study differ from quantitative research. First and foremost, the researcher seeks believability, based on coherence, insight and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985) through a process of verification rather than through traditional validity and reliability measures. *[Qualitative characteristics are mentioned.]*

## **The Ethnographic Research Design**

This study will utilize the ethnographic research tradition. This design emerged from the field of anthropology, primarily from the contributions of Bronislaw Malinowski, Robert Park and Franz Boas (Jacob, 1987; Kirk & Miller, 1986). The intent of ethnographic research is to obtain a holistic picture of the subject of study with emphasis on portraying the everyday experiences of individuals by observing and interviewing them and relevant others (Fraenkel & Wallen, 1990). The ethnographic study includes in-depth interviewing and continual and ongoing participant observation of a situation (Jacob, 1987) and in attempting to capture the whole picture

## The Researcher's Role

Particularly in qualitative research, the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions and biases at the outset of the study. The investigator's contribution to the research setting can be useful and positive rather than detrimental (Locke et al., 1987). My perceptions of higher education and the college presidency have been shaped by my personal experiences. From August 1980 to May 1990 I served as a college administrator on private campuses of 600 to 5,000. Most recently (1987-1990), I served as the Dean for Student Life at a small college in the Midwest. As a member of the President's cabinet, I was involved with all top level administrative cabinet activities and decisions and worked closely with the faculty, cabinet officers, president and board of trustees. In addition to reporting to the president, I worked with him through his first year in office. I believe this understanding of the context and role enhances my awareness, knowledge and sensitivity to many of the challenges, decisions and issues encountered as a first year president and will assist me in working with the informant in this study. I bring knowledge of both the structure of higher education and of the role the college presidency. Particular attention will be paid to the role of the new president in initiating change, relationship building, decision making, and providing leadership and vision.

Due to previous experiences working closely with a new college president, I bring certain biases to this study. Although every effort will be made to ensure objectivity, these biases may shape the way I view and understand the data I collect and the way I interpret my experiences. I commence this study with the perspective that the college presidency is a diverse and often difficult position. Though expectations are immense, I question how much power the president has to initiate change and provide leadership and vision. I view the first year as critical; filled with adjustments, frustrations, unanticipated surprises and challenges. [Author reflected on her role in the study.]

## Bounding the Study

### Setting

This study will be conducted on the campus of a state college in the Midwest. The college is situated in a rural Midwestern community. The institution's 1,700 students nearly triple the town's population of 1,000 when classes are in session. The institution awards associate, bachelor and master's degrees in 51 majors.

### Actors

The informant in this study is the new President of a state college in the Midwest. The primary informant in this study is the President. However, I will be observing him in the context of administrative cabinet meetings. The president's cabinet includes three Vice Presidents (Academic Affairs, Administration, Student Affairs) and two Deans (Graduate Studies and Continuing Education).

### Events

Using ethnographic research methodology, the focus of this study will be the everyday experiences and events of the new college president, and the perceptions and meaning attached to those experiences as expressed by the informant. This includes the assimilation of surprising events or information, and making sense of critical events and issues that arise.

### Processes

Particular attention will be paid to the role of the new president in initiating change, relationship building, decision making, and providing leadership and vision. [Author mentioned data collection boundaries.]



Most authors who discuss qualitative research design address the importance of ethical considerations (Locke et al., 1982; Marshall & Rossman, 1989; Merriam, 1988; Spradley, 1980). First and foremost, the researcher has an obligation to respect the rights, needs, values, and desires of the informant(s). To an extent, ethnographic research is always obtrusive. Participant observation invades the life of the informant (Spradley, 1980) and sensitive information is frequently revealed. This is of particular concern in this study where the informant's position and institution are highly visible. The following safeguards will be employed to protect the informant's rights: 1) the research objectives will be articulated verbally and in writing so that they are clearly understood by the informant (including a description of how data will be used), 2) written permission to proceed with the study as articulated will be received from the informant, 3) a research exemption form will be filed with the Institutional Review Board (Appendixes B1 and B2), 4) the informant will be informed of all data collection devices and activities, 5) verbatim transcriptions and written interpretations and reports will be made available to the informant, 6) the informant's rights, interests and wishes will be considered first when choices are made regarding reporting the data, and 7) the final decision regarding informant anonymity will rest with the informant. *[Author addressed ethical issues and IRB review.]*

### Data Collection Strategies

Data will be collected from February through May, 1992. This will include a minimum of bi-monthly, 45 minute recorded interviews with the informant (initial interview questions, Appendix C), bimonthly two hour observations of administrative cabinet meetings, bi-monthly two hour observations of daily activities and bi-monthly analysis of the president's calendar and documents (meeting minutes, memos, publications). In addition, the informant has agreed to record impressions of his experiences, thoughts and feelings in a taped diary (guidelines for recorded reflection, Appendix D). Two follow-up interviews will be scheduled for the end of May 1992 (See Appendix E for proposed timeline and activity schedule). *[The author proposed to use face-to-face interviews, participate as observer, and obtain private documents.]*

To assist in the data collection phase I will utilize a field log, providing a detailed account of ways I plan to spend my time when I am on-site, and in the transcription and analysis phase (also comparing this record to how time is actually spent). I intend to record details related to my observations in a field notebook and keep a field diary to chronicle my own thinking, feeling, experiences and perceptions throughout the research process. *[The author recorded descriptive and reflective information.]*

### Data Analysis Procedures

Merriam (1988) and Marshall and Rossman (1989) contend that data collection and data analysis must be a simultaneous process in qualitative research. Schatzman and Strauss (1973) claim that qualitative data analysis primarily entails classifying things, persons, and events and the properties which characterize them. Typically throughout the data analysis process ethnographers index or code their data using as many categories as possible (Jacob, 1987). They seek to identify and describe patterns and themes from the perspective of the participant(s), then attempt to understand and explain these patterns and themes (Agar, 1980). During data analysis the data will be organized categorically and chronologically, reviewed repeatedly, and continually coded. A list of major ideas that surface will be chronicled (as suggested by Merriam, 1988). Taped interviews and the participant's taped diary will be transcribed verbatim. Field notes and diary entries will be regularly reviewed. *[Author described steps in data analysis.]*

In addition, the data analysis process will be aided by the use of a qualitative data analysis computer program called HyperQual. Raymond Padilla (Arizona State University) designed HyperQual in 1987 for use with the Macintosh computer. HyperQual utilizes HyperCard software and facilitates the recording and analysis of textual and graphic data. Special stacks are designated to hold and organize data. Using HyperQual the researcher can directly "enter field data, including interview data, observations, researcher's memos, and illustrations ... (and) tag (or code) all or part of the source data so that chunks of data can be pulled out and then be reassembled in a new and illuminating configuration" (Padilla, 1989, pp. 69-70). Meaningful data chunks can be identified, retrieved, isolated, grouped and regrouped for analysis. Categories or code names can be entered initially or at a later date. Codes can be added, changed or deleted with HyperQual editor and text can be searched for key

## Verification

In ensuring internal validity, the following strategies will be employed:

1. Triangulation of data—Data will be collected through multiple sources to include interviews, observations and document analysis;
2. Member checking—The informant will serve as a check throughout the analysis process. An ongoing dialogue regarding my interpretations of the informant's reality and meanings will ensure the truth value of the data;
3. Long terms and repeated observations at the research site—Regular and repeated observations of similar phenomena and settings will occur on-site over a four month period of time;
4. Peer examination—a doctoral student and graduate assistant in the Educational Psychology Department will serve as a peer examiner;
5. Participatory modes of research—The informant will be involved in most phases of this study, from the design of the project to checking interpretations and conclusions; and
- 6.