Elks, he hopes to observe the chapter's meetings, rituals, and charitable activities and to discover the chapter's beliefs, values, goals, and interpersonal dynamics.

2. A researcher wants to determine to what degree and in what ways television commercials might portray men and women in traditionally gender-stereotypical ways (e.g., how often men versus women are shown cleaning house, how often men versus women are making important business decisions).
3. In order to learn how grassroots political parties emerge and develop over time, a researcher wants to study the origins and evolution of three recently established "Tea Party" groups, one in her own state and two in neighboring states.
4. A researcher is intrigued by Asperger syndrome, a cognitive disability in which people have average or above-average intelligence and language skills but poor social skills and little or no ability to interpret other people's nonverbal social cues (body language, etc.). The researcher wonders what it must be like to be an adolescent with this syndrome—how a teenager is apt to feel about having few or no friends, being regularly excluded from classmates' social activities, and so on.
5. A researcher wants to determine how doctors, nurses, and other hospital staff members coordinate their actions when people with life-threatening traumatic injuries arrive at the emergency room. The researcher can find very little useful research on this topic in professional journals.

Collecting Data in Qualitative Research

As you have seen, qualitative researchers often use multiple forms of data in any single study. They might use observations, interviews, objects, written documents, audiovisual materials, electronic entities (e.g., e-mail messages, Internet websites), and anything else that can help them answer their research question. Furthermore, many qualitative studies are characterized by an **emerging design**: Data collected early in the investigation often influence the kinds of data the researcher subsequently gathers.

In qualitative research, the potential sources of data are limited only by the researcher's open-mindedness and creativity. For example, in a school setting, a researcher might consider where various students are seated in the lunch room, what announcements are posted on the walls, or what messages are communicated in graffiti (Eisner, 1998). In an ethnographic study of a cultural group, a researcher might ask one or more participants to keep a daily journal or to discuss the content and meaning of photographs and art objects (Creswell, 2007).

Regardless of the kinds of data involved, data collection in a qualitative study takes a great deal of time. The researcher should record any potentially useful data thoroughly, accurately, and systematically, using field notes, audiotapes, sketches, photographs, or some combination of these. As they collect data, many qualitative researchers also begin jotting notes—sometimes called **memos**—about their initial interpretations of what they are seeing and hearing.

It is essential that data collection methods be consistent with the ethical principles presented in Chapter 4. The people being studied must know the nature of the study and be willing participants in it (this is *informed consent),* and any data collected should not be traceable back to particular individuals (thus maintaining participants' *right to privacy*). One common way of keeping personal data confidential is to assign various pseudonyms to different participants and to use those pseudonyms both during data collection and in the final research report.

Common to all qualitative studies is a need to identify an appropriate *sample* from which to acquire data. Another feature that most qualitative studies share (content analyses excepted) is heavy reliance on *observations, interviews,* or both, as a source of data. We now look at each of these three topics more closely.

Sampling

Qualitative researchers typically draw their data from many sources—not only from a variety of people but perhaps also from objects, text materials, and audiovisual and electronic records. The particular entities they select for analysis comprise their **sample**, and the process of selecting them is called **sampling**.

Only rarely—for instance, when a researcher conducts a content analysis of a small group of items—can a researcher look at *everything* that has potential relevance to the research problem. More typically, the researcher must be choosy about the data to gather and analyze and, as a result, will get an incomplete picture of the phenomenon in question. One experienced qualitative researcher has described the situation this way:

> Whether observing, interviewing, experiencing, or pursuing some combination of strategies, you cannot be everywhere at once or take in every possible viewpoint at the same time. Instead . . . you develop certain perspectives by engaging in some activities or talking to certain people rather than others. . . . You build assertions toward the never-quite-attainable goal of "getting it right," approximating realities but not establishing absolutes.
>
> Your task, both derived from and constrained by your presence, is thus inherently interpretive and incomplete. The bottom line is that there is no bottom line: It is not necessary (or feasible) to reach some ultimate truth for your study to be credible and useful. (Schram, 2006, p. 134)

How you identify your sample must depend on the research question(s) you want to answer. If you want to draw inferences about an entire population or body of objects, you must choose a sample that can be presumed to *represent* that population or body. Ideally, this sample is chosen through a completely random selection process or through a process that incorporates appropriate proportions of each subgroup within the overall group of people or objects. We consider several such sampling strategies in our discussion of descriptive quantitative research in Chapter 8. (Truly effective researchers often draw on methodologies from diverse research traditions.)

Often, however, qualitative researchers are intentionally *non*random in their selection of data sources. Instead, their sampling is *purposeful:* They select those individuals or objects that will yield the most information about the topic under investigation. For example, grounded theory researchers tend to engage in **theoretical sampling**, choosing data sources that are most likely to help them develop a theory of the process in question. Later, they may employ **discriminant sampling**, returning to particular data sources that can help them substantiate the theory.

A novice qualitative researcher might ask: How large should my sample be? How much is enough? There are no easy, cut-and-dried answers to these questions, but we offer three suggestions that might be helpful in decision making:

1. Be sure that the sample includes not only seemingly "typical" but also seemingly "nontypical" examples.
2. When a power hierarchy exists—as it does in the workplace and in many clubs and communities—sample from various levels in the hierarchy. For example, in the workplace, interview both bosses and employees; in a club or community, interview not only highly active, influential members but also less involved individuals (e.g., see Becker, 1970).
3. Actively look for cases that can potentially discredit emerging hypotheses and theories (see the description of *negative case analysis* in Chapter 4).

Ideally the sample should provide information not only about how things are *on average* but also about how much *variability* exists in the phenomenon under investigation.

Observations

The qualitative researcher may make observations either as a relative outsider or, especially in the case of an ethnography, as a participant observer. Unlike observations conducted in quantitative studies (see Chapter 8), observations in a qualitative study are intentionally unstructured and free-flowing: The researcher shifts focus from one thing to another as new and potentially

significant objects and events present themselves. The primary advantage of conducting observations in this manner is flexibility: The researcher can take advantage of unforeseen data sources as they surface.

Such an approach has its drawbacks, of course. The researcher (especially a novice researcher) won't always know what things are most important to look for, especially at the beginning, and so may waste considerable time observing and recording trivialities while overlooking entities that are more central to the research question. A second disadvantage is that *by his or her very presence,* the researcher may influence what people say and do or may change how significant events unfold (recall the discussion of *reactivity* in Chapter 4).

Recording events can be problematic as well. Written notes are often insufficient to capture the richness of what one is observing. Yet audiotapes and videotapes aren't always completely dependable either. Background noises may make tape-recorded conversations only partially audible. A video camera can capture only the events happening in a small, focused area. And the very presence of tape recorders and video cameras may make some participants uncomfortable.

If you decide to conduct observations as part of a qualitative study, we offer these suggestions:

1. Before you begin your study, experiment with various data recording strategies (field notes, audiotapes, videotapes), identify the particular methods that work best for you, and practice using them in other contexts.
2. When you begin your observations, have someone introduce you to the people you are watching. At this point, you should briefly describe your study and get participants' informed consent.
3. As you observe, remain relatively quiet and inconspicuous, yet be friendly to anyone who approaches you. You certainly don't want to discourage people from developing relationships with you and—perhaps later—taking you into their confidence.
4. If you take field notes, consider dividing each page of your notebook or word processing document into two columns. Use the left column to record your observations (making notes, drawing maps, etc.), and use the right column to write your preliminary interpretations—the *memos* we spoke of earlier.

The last suggestion is a particularly important one. *It is essential that you not confuse your actual observations with your interpretations of them,* for two reasons. First, you need to be as objective as you can in the records you keep. And second, your interpretations of what you have seen and heard are apt to change over the course of the study.

Interviews

Interviews can yield a great deal of useful information. The researcher can ask questions related to any of the following (Silverman, 1993):

- Facts (e.g., biographical information)
- People's beliefs and perspectives about the facts
- Feelings
- Motives
- Present and past behaviors
- Standards for behavior (i.e., what people think *should* be done in certain situations)
- Conscious reasons for actions or feelings (e.g., why people think that engaging in a particular behavior is desirable or undesirable)

However, keep in mind that, especially when a researcher asks about *past* events, behaviors, and perspectives, interviewees must rely on their memories, and human memory is rarely as accurate as a tape recorder or video recorder might be. In fact, people's memories are subject to considerable distortion: People are apt to recall what *might* or *should* have happened (based on their attitudes or beliefs) rather than what actually *did* happen (e.g., see Brainerd & Reyna, 2005; Schwarz, 1999). And even when people are talking about present circumstances, they aren't always terribly insightful—and sometimes they're intentionally dishonest—about their attitudes, feelings, and motives (Corallo, Sackur, Dehaene, & Sigman, 2008; Uziel, 2010). Thus, the shrewd

researcher will seek to substantiate participants' introspective reports with observations of their behavior and other relevant data (Locke, 2009).

Interviews in a qualitative study are rarely as structured as the interviews conducted in a quantitative study (more about quantitative study interviews in Chapter 8). Instead, they are either open-ended or semistructured, in the latter case revolving around a few central questions. Unstructured interviews are, of course, more flexible and more likely to yield information that the researcher hadn't planned to ask for. Their primary disadvantage is that the researcher gets different information from different people and thus may not be able to compare the responses of various interviewees.

In some cases, a researcher may want to interview several participants simultaneously in a **focus group**. To conduct a focus group, the researcher gathers several people (usually no more than 10 or 12) to discuss a particular issue for 1 to 2 hours. A moderator—someone who may or may not be the researcher—introduces the issues to be discussed, makes sure that no one dominates the discussion, and keeps people focused on the topic. Focus groups are especially useful when time is limited, group members feel comfortable sharing their thoughts and feelings with one another, and the group interaction might be more informative than individually conducted interviews (Creswell, 2007; Neuman, 2011).

PRACTICAL APPLICATION Conducting Interviews in a Qualitative Study

Conducting an informative interview is not as easy as it might seem. In this section we offer guidelines for the novice researcher and then suggest computer technology that can make the task easier.

GUIDELINES Conducting a Productive Interview

The following suggestions are based partly on our own experiences and partly on guidance offered by experts in qualitative research (Creswell, 2007, 2009; Eisner, 1998; Shank, 2006; Silverman, 1993):

1. *Identify some questions in advance.* Conducting an unstructured interview effectively requires considerable experience and skill: The researcher must sense when the conversation is drifting in an unproductive direction and gently guide it back on course. Novice researchers often have greater success when they prepare a few questions in advance and make sure that all of the questions are addressed at some point during the interview. These questions should, of course, be related to the research questions and overall research problem. As an example, in a qualitative study she conducted for her doctoral dissertation, Debby Zambo examined how children with reading disabilities believe their minds work when they read. She worked with and extensively studied 11 children in grades 5 through 9, interviewing them 10 to 15 times over the course of her investigation. Figure 6.1 presents an excerpt from her dissertation, in which she shows how her interview questions aligned with her research questions.

For any single interview, limit your list of questions to a small number, perhaps five to seven of them. (Although Debby Zambo had many more questions than this, she spread them throughout a dozen or so interviews with each child.) You will find that you won't necessarily need to ask every question explicitly, as the answers to some may emerge while a participant is responding to others.

Ideally, interview questions should encourage people to talk about a topic *without* hinting that they give a *particular* answer. In other words, avoid leading questions. Questions such as "What is going on now?" "What is it like to work here?" and "What's a typical day like?" can stimulate an informative conversation without suggesting that one kind of response is somehow more desirable than another (Shank, 2006).

2. *Consider how participants' cultural backgrounds might influence their responses.* In an effort to ascertain men's beliefs about ideal family size for a research project in what is now Bangladesh, Howard Schuman (1967) asked a seemingly simple question: "Suppose you had no children. How many would you like to have?" Most men responded, "As many as God wills." This

FIGURE 6.1

Example of how a researcher might align interview questions with research questions

From *Uncovering the Conceptual Representations of Students with Reading Disabilities* (pp. 140–142) by D. Zambo, 2003, unpublished doctoral dissertation, Arizona State University, Tempe. Reprinted with permission.

Research Question	Interview Question
1. What do students with reading disabilities think about reading and themselves?	
a. What are their thoughts about reading?	What do they think reading is all about? What do they find easy/difficult to read? Who do they think good/poor readers are and what do good/poor readers do? How do you become good/poor at reading?
b. What are their ideas about themselves and reading?	What are they reading? What do they think is easy/difficult to read? What goes on in their head when they read easy/difficult things? What is their activity level (calm/fidgety) when they read? What body parts do they use when they read? How do they think reading has/will impact their lives in the past, present, and future?
2. What emotions are evoked when they read?	Do they get frustrated when they read? What other emotions may be involved when they read? Does believing they can get better at reading help them be a better reader? Does hoping they can get better at reading help them be a better reader? Does wishing they can get better at reading help them be a better reader?
3. What do children with reading difficulties know about the cognitive processes of reading?	
a. What do they know about attention?	What is attention? Do they recognize that they must focus their attention when they read? What do they focus on? Why do they focus on that? Do they have difficulty with attention? If so, what do they do? Is their attention easy or difficult to capture when they read? Can they sustain their attention enough when they read? What do they do to sustain their attention? How consistent is their attention? What do they do to make their attention consistent? Is their attention better on some days and when is it better? What do they do if their attention is better on some days? What distracts them when they read? Do ideas and memories pop into their heads and distract them when they read?
b. What do they know about their memory and reading?	What do they know about memory in general? What do they do to put things into their memory? What do they do to keep things in their memory? How do they remember what they read? How do they remember/understand what they have read?

(continued)

FIGURE 6.1
Continued

Research Question	Interview Question
4. What do students with dyslexia know about the brain and reading?	Do they understand the brain is interconnected with external body parts? Analogy—Can they create an analogy for the brain? Metacognition—Thinking about thinking—What do they wonder about their mind/brain? [What do they] think about their thinking? Can they differentiate mental entities (thoughts, dreams, and memories) from close imposters?
5. What do children with dyslexia know about their dyslexic mind?	How do their brains work when they read? Are their brains like or different from other's brains when they read? Do they listen/see/feel things in their brains when they read? How do they do this? Do they think their minds are active when they read? What happens in their minds when they read? What do they do to make this happen? Are they aware of what is in their minds as they read? Are their minds excited when they read? How do things get from a book to their brains?

response reflected a widespread cultural tradition at the time: to leave one's fate in the hands of God, or at least to *say* that one's fate is in God's hands. Wisely, Schuman revised the question: "Suppose you had no children. If God wished to give you as many children as you wished, how many would you wish for?" (p. 22). This revision yielded responses that were far more useful in addressing Schuman's research question.

As Schuman discovered, participants' cultural backgrounds can influence their interview responses in ways you haven't necessarily anticipated. For instance, if you are interviewing people from Asian cultures, you should be aware that they are less likely to brag about their individual accomplishments than Westerners are (Heine, 2007). A naive researcher might erroneously conclude that Asian individuals are less productive than Western individuals, when in reality Asian individuals are merely less *boastful* than their Western counterparts.

Social scientists have only begun to identify the many ways in which people from various cultural groups may respond differently in interview situations. Thus we can give you only general, nonprescriptive advice here: Be sensitive to the fact that culture may play a significant role in how your participants interpret and respond to your questions, and experiment with multiple ways of asking for the kinds of information you ultimately want to obtain.

3. *Make sure your interviewees are representative of the group.* You should choose people whom you expect to give you typical perceptions and perspectives. But as noted in the earlier discussion of sampling, you may also intentionally pick a few "extremists" or other exceptional individuals; however, when you do so, you should identify them as such in your notes.

4. *Find a suitable location.* In theory, you can conduct an interview anywhere that people are willing to talk to you. But you will probably have a more successful interview if you find a quiet place where you and your interviewee are unlikely to be distracted or interrupted.

5. *Get written permission.* Explain the nature of the study and your plans for using the results. Ask the participant (or, in the case of a child, the participant's parent or legal guardian) to sign an informed consent form. Offer to provide an abstract or copy of the research report once you have completed the study.

6. *Establish and maintain rapport.* Begin the conversation with small talk that can break the ice. Be courteous and respectful at all times. Show genuine interest in what the person has to say.

Interviews in qualitative studies are typically quite informal, to the point where they may appear similar to casual conversation. There is one critical difference between a qualitative

interview and normal dialogue, however: The researcher wants to gain information from the interviewee without also revealing his or her own perspectives. In other words, a critical element of most intimate conversations—disclosure of one's thoughts, beliefs, and feelings—is lopsided, with only one member of the pair doing the disclosing. To maintain rapport and general feelings of closeness and trust, therefore, you must show compassion and interest in other ways, perhaps through body language (smiling, maintaining eye contact, leaning forward) and such neutral encouragements as "Go on" and "What do you mean?" (Shank, 2006).

7. *Focus on the actual rather than on the abstract or hypothetical.* You are more likely to get revealing information if you ask what a person *does or would do in a specific situation.* For example, if you are interviewing a teacher, ask questions about specific teaching strategies rather than about educational philosophy. Otherwise, you might get nothing more than what Eisner (1998) has described as "pious, canned proclamations that seem as though they had been snatched from a third-rate philosophy of education text" (p. 183).

8. *Don't put words in people's mouths.* Let people choose their own way of expressing their thoughts. A good interviewer is, above all, a good listener who lets people say what they want to say in the way they want to say it. Furthermore, a good interviewer recognizes that people may reveal inconsistencies in their recollections, attitudes, and logic: Their perceptions won't necessarily all fit together in a neat little package (Kvale, 1996).

9. *Record responses verbatim.* Whether you use handwritten notes, shorthand, a tape recorder, or laptop computer, capture everything the person says, especially if the interview is an unstructured one. If you suspect that an interviewee may have said something other than what he or she intended to communicate, read or play back the response and ask if it accurately reflects his or her thoughts.

10. *Keep your reactions to yourself.* Although you won't necessarily want to maintain a continual "poker face," you're more likely to get accurate information if you don't show surprise, agreement, or disapproval of what someone tells you.

11. *Remember that you are not necessarily getting the facts.* As confident and convincing as some of your participants may be, you should always treat their responses as *perceptions* rather than as facts.

12. *When conducting a focus group, take group dynamics into account.* Whenever you gather two or more individuals into a single interview, these individuals will rarely act as true equals. Some participants are likely to dominate the conversation. Others may be reluctant to express their views, perhaps because they are shy or feel uncertain about the validity of their perspectives. In most cases, you will get more representative data—and hence more *useful* data—if you make sure that everyone in the group has a chance to answer each question. Accordingly, you should keep your list of questions for a focus group quite short. And if you are recording the focus group session, ask participants to identify themselves by name at the beginning of the session; having them do so will help you identify different speakers when you transcribe the session later on.

Using Technology to Facilitate Data Collection and Transcription

With appropriate hardware and software, most laptops can be configured to serve as audio recorders. And, of course, videos recorded on a camcorder can be easily downloaded to a personal computer. Meanwhile, transcription software, such as HyperTRANSCRIBE, lets you mark key points in a videotaped or audiotaped interview, retrieve desired pieces of information quickly, and slow down what you have recorded so that you can transcribe it more easily. Other software programs will even do your transcribing for you. The capabilities of this software are expanding all the time. We urge you to look at such software as Dragon Dictate, IBM VoiceType Simply Speaking, Naturally Speaking, and ViaVoice to see how their latest versions might make your recording and interviewing tasks easier and less time-consuming.

In some cases, you can conduct qualitative interviews over long distances through various Internet mechanisms, including e-mail, instant messaging, or video conferencing. Keep in

mind, however, that ethical standards don't fly out the window simply because you are conversing with people in cyberspace rather than in the same room. You must still seek participants' (or parents') informed consent, and you must protect participants' privacy. Furthermore, you must ensure that participants have appropriate characteristics and qualifications for your investigation—something that may be difficult to determine if you never see these individuals in the flesh.

Organizing and Analyzing Qualitative Data

As you have undoubtedly realized by this time, there is usually no single "right" way to analyze the data in a qualitative study. The researcher begins with a large body of information and must, through inductive reasoning, sort and categorize it and gradually boil it down to a small set of abstract, underlying themes. Even in content analysis—an approach that, on the surface, may seem quite straightforward and matter-of-fact—the researcher often determines the specific characteristics to be studied only after carefully scrutinizing the body of material in search of potentially meaningful characteristics to identify and count.

In the quantitative designs we examine in Chapters 8 and 9, data analysis and data interpretation are, in large part, two separate steps, with numerical data being mathematically manipulated and statistically analyzed, followed by interpretations of those manipulations and analyses in order to address the original research questions and hypotheses. In most qualitative research, however, data analysis and interpretation are closely interwoven, and both are often enmeshed with data collection as well. Schram (2006) has expressed this idea quite eloquently:

> Experiences do not speak for themselves; nor do features within a research setting directly or spontaneously announce themselves as worthy of your attention. As a qualitative fieldworker, you cannot view your task simply as a matter of gathering or generating "facts" about "what happened." Rather, you engage in an active process of *interpretation:* noting some things as significant, noting but ignoring others as not significant, and missing other potentially significant things altogether. (p. 11)

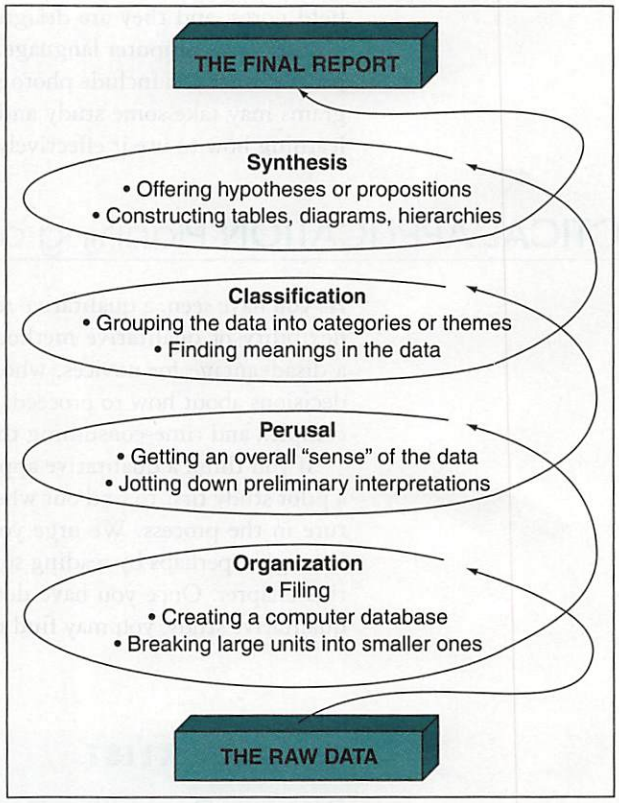
Creswell (2007) has described a **data analysis spiral** that is, in our view, equally applicable to a wide variety of qualitative studies. Using this approach, you go through the data several times, taking the following steps:

1. Organize the data, perhaps using index cards, manila folders, or a computer database. You may also break down large bodies of text into smaller units, perhaps in the form of stories, sentences, or individual words.
2. Peruse the entire data set several times to get a sense of what it contains as a whole. In the process, you should jot down a few memos that suggest possible categories or interpretations. If your data are in paper form, you might write comments in the margins or use Post-it notes to capture your preliminary thoughts. If your data are in electronic form, you might use the *insert comment* feature available in many software programs, or you might add your initial impressions in a different font or color or, for a spreadsheet or database, in a separate column or field.
3. Identify general categories or themes, and perhaps subcategories or subthemes as well, and then classify each piece of data accordingly. At this point, you should be getting a general sense of patterns—a sense of *what the data mean.*
4. Integrate and summarize the data for your readers. This step might include offering propositions or hypotheses that describe relationships among the categories. It might also involve packaging the data into an organizational scheme such as a table, figure, matrix, or hierarchical diagram.

We depict this spiral graphically in Figure 6.2.

No matter how you proceed, the data analysis for a qualitative study is a complex and time-consuming process. You must wade through a great deal of information, some of which will be

FIGURE 6.2
The data analysis spiral (based on Creswell, 2007)



useful and some of which will not. Furthermore, the data you obtain are apt to be multifaceted and may simultaneously reflect several distinct meanings.

In a qualitative study, the interpretation of the data will inevitably be influenced by the researcher's biases and values to some extent, reflecting the notion of *researcher as instrument* mentioned earlier. Nevertheless, we urge you to do as much as you can to minimize the extent to which your prior expectations and opinions enter into your final analysis, perhaps by using some or all of the following strategies:

- Collect two or more different kinds of data (e.g., observations, interviews) related to any particular phenomenon.
- Get multiple and varying perspectives on any single issue or event.
- Make a concerted effort to look for evidence that contradicts your hypotheses.
- In your final research report, acknowledge any biases you have, so that your readers can take them into account when reading the report.

Using Computer Databases to Facilitate Data Organization and Interpretation

USING TECHNOLOGY

We authors are guessing that you will use word processing or similar software to record interviews and perhaps some of your other data as well. By storing your data on a computer, you can easily retrieve any piece of information using a relevant keyword, and you can sort your data quickly and in multiple ways. As a precaution against some unforeseen catastrophe (e.g., a flood or fire), you should back up your files on a flash drive or other external storage device that you store in a safe location (e.g., in a safe deposit box or at the home of a trustworthy relative).

We suggest that you also consider using computer software to help you organize and interpret your data. For some studies, a simple spreadsheet program such as Excel may suffice (see Appendix A). Other software programs are especially suited for complex qualitative research studies (e.g., ATLAS.ti, Ethnograph, SuperHyperQual, HyperRESEARCH, Kwalitan, MAXQDA, NVivo). Such programs provide a ready means of storing, segmenting, and organizing lengthy

field notes, and they are designed to help you find patterns in your notes. Typically you can transfer—in computer language, you can *import*—word processing files into the programs; some programs let you include photographs, audiotapes, and videotapes as well. Any one of these programs may take some study and practice to master, but keep in mind that the time you spend learning how to use it effectively is likely to *save* you time in the long run.

PRACTICAL APPLICATION Planning a Qualitative Study

As you have seen, a qualitative research project is not something to be entered into casually. The flexibility of qualitative methodologies is an advantage for experienced researchers but often a disadvantage for novices, who may not have sufficient background or training to make wise decisions about how to proceed. Furthermore, data collection and data analysis may be far more complex and time-consuming than a researcher anticipated.

If you think a qualitative approach might be suitable for your purposes, you may want to do a pilot study first to find out whether you feel comfortable with the ambiguity and lack of structure in the process. We urge you, too, to learn as much as you can about qualitative research strategies, perhaps by reading some of the sources in the "For Further Reading" list at the end of this chapter. Once you have determined that you have both the time and skills to conduct a qualitative study, you may find the following checklist helpful in your planning.

✔ CHECKLIST

Pinning Down the Details of a Qualitative Study

What Is the Purpose of the Project?

_____ 1. What is the current status of knowledge pertaining to the question?

_____

_____

_____

_____ 2. Why is the study important?

_____

_____

_____

What Is the Specific Focus and Design of the Project?

_____ 3. Will the focus be on individuals, groups, cultures, experiences, processes, or content?

_____

_____ 4. Will the design be a case study, ethnography, phenomenological study, grounded theory study, content analysis, a combination of two or more of these, or none of these?

_____

What Data Are Needed?

_____ 5. How will you gain access to the site?

_____

_____

_____ 6. How much time will you need?

_____

_____ 7. What resources are needed and available?

_____

_____

_____

_____ 8. Are there any existing constraints on data collection?

_____

_____

How Will the Data Be Collected?

_____ 9. How will the participants or materials be sampled?

_____

_____

_____ 10. What role will you, as the researcher, assume?

_____

_____

_____ 11. How will you ensure anonymity and confidentiality for the participants?

_____

_____

_____ 12. What procedures will you follow, and in what order?

_____

_____

_____

_____

How Will the Analysis Be Conducted?

_____ 13. What is the unit of analysis (person, event, story, artifact, etc.)?

_____

_____ 14. What methods of analysis will you use?

_____

_____

_____

_____ 15. How will you make sure that you and others can have confidence in your findings?

_____

_____

_____

How Will the Findings Be Communicated?

_____ 16. How will you describe the context?

_____

_____

_____

_____ 17. How will you convey the participants' perspectives?

_____

_____

_____

_____ 18. What format(s) will you use to synthesize the data?

_____

_____

_____

Criteria for Evaluating Qualitative Research

How do readers, reviewers, and practitioners assess the worth of a qualitative proposal or research study? What characteristics are essential to a good study? What makes one study "excellent" and another study only "marginal"?

Experienced qualitative researchers have offered a variety of standards that might be used to evaluate a qualitative study (Altheide & Johnson, 1994; Creswell, 2007, 2009; Eisner, 1998; Gall, Gall, & Borg, 2007; Glaser, 1992; Howe & Eisenhardt, 1990). We have boiled down their suggestions to nine general criteria:

1. **Purposefulness.** The research question drives the methods used to collect and analyze data, rather than the other way around.
2. **Explicitness of assumptions and biases.** The researcher identifies and communicates any assumptions, beliefs, values, and biases that may influence data collection and interpretation.
3. **Rigor.** The researcher uses rigorous, precise, and thorough methods to collect, record, and analyze data. The researcher also takes steps to remain as objective as possible throughout the project.
4. **Open-mindedness.** The researcher shows willingness to modify hypotheses and interpretations when newly acquired data conflict with previously collected data.
5. **Completeness.** The researcher depicts the object of study in all of its complexity. The researcher spends sufficient time in the field to understand all nuances of a phenomenon; describes the physical setting, behaviors, and perceptions of participants; and gives readers an in-depth, multifaceted picture of the phenomenon (i.e., *thick description*).
6. **Coherence.** The data yield consistent findings, such that the researcher can present a portrait that "hangs together." Multiple data sources converge onto consistent conclusions *(triangulation),* and any contradictions within the data are reconciled.
7. **Persuasiveness.** The researcher presents logical arguments, and the weight of the evidence suggests one interpretation to the exclusion of others.
8. **Consensus.** Other individuals, including the participants in the study and other scholars in the discipline, agree with the researcher's interpretations and explanations.
9. **Usefulness.** The project yields conclusions that promote better understanding of the phenomenon, enable more accurate predictions about future events, or lead to interventions that enhance the quality of life.

PRACTICAL APPLICATION Evaluating Qualitative Research Studies

Drawing from the preceding criteria, as well as from guidelines presented by Good (1993), we offer the following checklist to help you evaluate a final report for a qualitative research project. Some of the items in the checklist are equally applicable to a proposal for a future qualitative project.

✔ CHECKLIST

Evaluating a Qualitative Study

	METHODS	YES	NO
_____	1. Is the context/setting of the study adequately described?	_____	_____
_____	2. Are techniques for data collection appropriate for the research problem? Are they thoroughly and precisely described?	_____	_____
_____	3. Are multiple data sources used?	_____	_____
_____	4. Are sufficient data collected from a variety of participants over an appropriate length of time?	_____	_____
_____	5. Are criteria for the selection of participants, informants, or materials presented? Is the sample described in sufficient detail?	_____	_____
_____	6. Are the roles of the researcher and participants made clear?	_____	_____
_____	7. Does the researcher identify any assumptions, beliefs, values, or biases that might influence data collection or analysis?	_____	_____
	FINDINGS AND INTERPRETATIONS		
_____	8. Are the data analysis techniques appropriate for the research question, methodology, and theoretical framework?	_____	_____
_____	9. Are data analysis techniques explicitly described?	_____	_____
_____	10. Do data analysis techniques allow for revision and reinterpretation as new data come to light?	_____	_____
_____	11. Is triangulation of the various data sources addressed?	_____	_____
_____	12. If used, are tables, figures, and other graphics easy to read and interpret? Do they enhance the reader's ability to understand the study?	_____	_____
_____	13. Are sufficient data reported to support the conclusions drawn?	_____	_____
_____	14. Are any irrelevant and unnecessary data reported? If so, what should be deleted? _____ _____	_____	_____
_____	15. Are discrepant data discussed and reconciled?	_____	_____
_____	16. Have the setting and observations been sufficiently described to present a convincing case?	_____	_____
_____	17. Are participant "voices" used to support the assertions and present multiple perspectives?	_____	_____
_____	18. Is the report detailed enough that the findings can be compared to other studies in other contexts?	_____	_____
_____	19. Is the discussion congruent with the research question and rationale for the study?	_____	_____
_____	20. Are implications for theory and/or practice discussed?	_____	_____

____	21. Have other scholars in the field reviewed the proposal or report? If so, do they agree that the approach, methodology, and conclusions are appropriate?	____	____
____	22. Have participants in the project read the report? Do they agree with its findings?	____	____
	WRITING STYLE		
____	23. Is the writing style (e.g., expository, narrative) appropriate for the study?	____	____
____	24. If a narrative is used, are the stories understandable? Are they authentic?	____	____
____	25. Is the writing style concise? Is the argument clear?	____	____
____	26. Are the writer's arguments logical and persuasive?	____	____

A Sample Dissertation

As an illustration of how the methodology of a qualitative research study might look, we present excerpts from Robin Smith's doctoral dissertation conducted at Syracuse University (Smith, 1999). The study was a multiple case study that also incorporated elements of grounded theory research and content analysis.

The study focused on five high school students who had significant intellectual disabilities. In particular, it examined the nature of the students' involvement and participation in high school classrooms. It looked, too, at teachers' perceptions and interpretations of the students' disabilities and academic performance.

The dissertation's "Method" chapter begins with an overview of the research strategies used and a rationale for selecting the individuals to be studied. It then presents more specific information about each of the five students: Gerald, Trish, Nick, Tyrone, and Abe (all pseudonyms). We pick up the chapter at the point where it begins a discussion of data collection. As we have done in preceding chapters of this book, we present excerpts on the left and a running commentary on the right.

Dissertation ANALYSIS 3

DATA COLLECTION PROCESSES

Data gained in the varied academic settings of the five students assisted in understanding the patterns of academic participation and the meanings and relationships of the five students regarding their academic participation in high school. I gathered data from the following sources:

Observations

Over three school semesters, I conducted observations of five high school students who were attending high school and enrolled in at least one academic subject in the general high school curriculum. These observations totaled 52 visits ranging in length . . .

Comments

Here the author provides information about the amount of time she spent in the field. Her observations varied considerably in duration depending on the situation; we are more apt to see such flexibility in a qualitative study than in a quantitative one.

the shortest was 15 minutes . . . the longest, 6 hours. . . . *(The author continues with a detailed discussion of the kinds of observations made and the circumstances in which she made them.)*

Conversations and Interviews

I had conversations and interviews with adults involved and concerned with the students, such as general and special education teachers, assistants, and parents. I recorded and described these conversations in field notes and transcriptions. . . .

The semi-structured interviews with the parents of each student included the following kinds of questions:

The interviews were presumably structured in this manner so that similar kinds of information would be obtained about each child.

1. Tell me about the history of your child's schooling.
2. What are the child's strengths? That is, what is he or she good at?
3. Where does it get hard for the student?
4. How does he or she like high school? How can you tell?
5. What do you see your child learning?
6. What are your goals and dreams for your child?
7. What else should I know about your child to better understand what is happening for him or her in school?

I conducted similar interviews with the special education teachers, which included discussion of their educational goals for the student. I conducted one formal interview with each special education teacher, with further interviews as necessary to enhance my understanding of my data. These other interviews were often in the form of brief conversations during or in between class, interviews by appointment, and phone conversations.

The author used follow-up unstructured interviews to gather additional information as needed. This strategy is consistent with a grounded theory approach, in which the researcher moves back and forth between data collection and data analysis.

I also conducted interviews with the general education teachers in the form of formal, informal, or brief conversations that fit into the teachers' schedules. . . . I also had some conversations with the general education teachers by staying a few minutes after class and asking them questions about what I had observed that day or how they thought the student was doing. . . .

I taped and had transcribed in-depth interviews, and I embedded observer comments in the transcribed text as I reviewed it. I wrote down informal conversations as soon as possible, and when possible, wrote during the conversations according to the comfort level of the participants with note taking. I used a Hewlett Packard 200LX-palmtop computer, which enabled me to take legible and detailed notes and add more detail soon after an observation.

The author used audiotapes and transcriptions to capture the details of in-depth interviews; she also wrote notes about shorter, more informal conversations as soon after they took place as possible. The phrase "according to the comfort level of the participants with note taking" might have been better worded as "to the extent that participants felt comfortable with my note taking." However, the phrase reflects an appropriate sensitivity about taking notes only when it did not make a participant feel uneasy. And notice the author's use of a small computer to facilitate data collection!

Official Records and Documents

Official records and documents were another source of information. At the very end of my study I went to the district office of special education, which kept the official records of all five of the students. I looked in each file to learn what I could about the students' grades and progress reports, along with the professional assessments and recommendations regarding the students' schooling. I took notes on my hand-held computer and read long quotes into my tape recorder for

Why did the author wait until the end to look at school records and documents? Later in this excerpt you will see her reason: She was worried that early knowledge of these records would bias her interpretations of what she observed in the classroom.

later reference and transcription. I took notes on students' work in class and from some student work I found in the files, and collected samples of their work where possible.

Finally, I relied heavily on very detailed field notes. At first I wrote everything I saw. As I narrowed my focus I consistently included the students' interactions with adults and peers, their reactions to what was going on, and what other students were doing at the same time. Describing interactions of the nonspeaking students was challenging; due to the crowded conditions of several of the general education classes and my being in a wheelchair, I was not always able to be close enough to the student to observe facial expressions. Fortunately, each student was accessible to me most of the time, especially when I was well into the study and a couple of sympathetic teachers invited the student to sit where I could be close by. Thus many of my observations were able to include whispered dialogue between the student and support person helping with an assignment.

This narrowing of focus as the study proceeds is frequently found in qualitative research.

Notice how the author is looking for nonverbal as well as verbal information. Notice, too, how cooperative participants (in this case, some "sympathetic teachers") can facilitate data collection.

CODING AND ANALYSIS

. . . As I collected and analyzed data from preliminary observations, I found issues to explore . . . questions arose that created a need for further observing or interviewing. Using the constant comparative method of analysis (Glaser & Strauss, 1967), I collected data, looked for emerging themes and recurrent events, categorized them, and reevaluated my themes and categories. As I collected more data, I wrote analytic memos about my data, and reevaluated my previous theories as I compared old data with new (Bogdan & Biklen, 1992, pp. 72-75). The themes of academic engagement, generated by my pilot study, continued to expand in depth and breadth, and they generated more themes that guided the development of my study.

The constant comparative method *is central to grounded theory research.*

Here we see that the author conducted an earlier pilot study*—something we urge any beginning researcher to do, particularly when planning a qualitative study.*

For example, Nick, one of the students I observed, sat with his assistant in the last row by the door, separated by another row of desks from the class; he seemed an observer in class lectures and discussions. When his assistant supported him to participate in hands-on activities, the assistant did the task for the student. The educators in the room said to me, "He doesn't understand much of what's going on," and they did not expect him to benefit from the actual curriculum content ("He's not getting much out of it."). In contrast, Trish, a student with even less physical coordination and verbal expression, followed a full academic schedule, and many of her teachers considered her to be involved, interested, and learning. This led me to look for signs of expectations of the student and how people evaluated the students. Thus, early data codes such as "expectation," "perception," and "assessment" led to a chapter regarding expectations and another regarding types of assessments.

Notice the author's attention to Nick's physical distance from other students—a clear, nonverbal indicator that Nick is essentially a nonparticipant, an outsider, in this classroom.

The ability to contrast one situation with another is a key advantage of a multiple case study.

I used Q.S.R. Nudist (QSR-NUD*IST, 1995) to code my data. This program enabled me to identify text segments in various ways, including participants' names and roles, as well as assigned categories such as "engaged," "disengaged," and "academics," that resulted in 98 data codes. A few of these original codes survived my ongoing revisions and collapsing of categories to my final analysis. I printed categories out in groups and coded them again by hand, testing new coding categories by merging several categories and reexamining the data. For example, many of the text segments that I had labeled "expectation" evolved into "assessment." Once I had determined

Here we see open coding, *the first step in data analysis in a grounded theory study.*

*NUD*IST was an early, groundbreaking computer database program especially suited for data collection in qualitative research.*

that assessment was an important category, I subdivided it into "formal," "informal," and "professional," each with its own set of categories which are explained in my data chapter, "Patterns of Assessment." . . . Further hand coding yielded the categories I finally used in the chapter on "participation." . . . *(The author continues the discussion of data coding and other issues and then turns to the subject of values.)*

Here data analysis has moved on to axial coding, *where the author is refining her categories and their interconnections.*

Exposing Researcher Values

During this research I have continuously inspected my expectations and values as a continuing reminder of the role that values have in inquiry. . . . Ongoing self-reflection in memos and discussions with mentors throughout the course of the study helped me identify and account for the interference of my assumptions in my study. . . . For example, sometimes I was tempted to express findings about expectations in cause and effect terms. . . .

In this section, the author reveals her biases and the strategies she used to counteract those biases. Regular conversations with her university advisor and others helped her identify assumptions she didn't initially realize she was making.

I expose my values in my narrative as playing a significant role in my inquiry. In sharing my values in the introduction, and further here, I have attempted to take them into account as I share my data and analysis. For example, as a disability rights advocate, I have hoped that my research regarding students with disabilities would be a contribution toward achieving equality and full integration of people with disabilities. I remained aware of my bias against the self-contained setting, where four of the students in the study were based, in order to see what might actually benefit the students in that setting. I am aware that my bias is related to my advocacy stance against segregation and to the negative accounts of friends who have experienced segregated special education. I also had a prejudice against professional assessments along with the likelihood . . . that I might be influenced by the contents if I read them early in the study. To counter inappropriate influence of this prejudice, I read the assessments at the end of my study and took a class in how to administer psychoeducational assessments. . . .

Here the author describes her bias in favor of inclusion, *where students with disabilities learn in general education classrooms alongside their nondisabled peers, rather than in* self-contained classrooms, *in which students with disabilities are segregated from nondisabled students.*

Here we discover why the author waited until the end of her study to look at school records.

As I listened to my informants, I was aware of my own assumption that students benefit from academic inclusion and that all students have the right to attain knowledge . . . for my observations and interviews, I kept an open mind to the notion that special education settings do not preclude learning, may even enhance it, and that observing the special education academic experiences could also inform me about student engagement and how they [students] participated in the academic activities.

Here the author is looking for disconfirming evidence, one effective strategy for minimizing the influence of a researcher's biases on data interpretation.

LEAVING THE FIELD

The process of leaving the field was gradual. I was learning less and less from observations by the end of spring. Completing ceasing the first school year observation was precipitated by the beginning of the university summer session and my assignment to spend all day in a suburban school as a student teacher. I was assigned to Trish's summer school class the second summer session and took notes on that experience. I visited her twice in the fall but was excluded from her general education classes due to overcrowding. Also in the fall, I spent two days with Tyrone. . . . By then I had been analyzing data and felt the main thing lacking was the assessment of material from official records. Waiting until the following summer to look into

In grounded theory terminology, the author has probably saturated *her categories at this point: Any additional information is shedding little or no new light on the subject matter.*

the records proved wise, as I was able to find them a rich source of data. I actually eased my way out of the field (Bogdan & Biklen, 1992, pp. 104-105) rather than leaving, keeping contacts with many of my informants and calling to find out what is going on with a student or to clarify a question.

Notice that the author didn't just disappear from the scene. Instead, she continued to maintain contact with her participants after her research was completed.

NOTE: Excerpt is from *Academic Engagement of High School Students with Significant Disabilities: A Competence-Oriented Interpretation* (pp. 18–30) by R. M. Smith, 1999, unpublished doctoral dissertation, Syracuse University, Syracuse, New York. Reprinted with permission.

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ANSWERS TO THE CONCEPTUAL ANALYSIS EXERCISE "Choosing a Qualitative Research Design" on page 150

1. The researcher wants to learn about the general *culture* of an Elks chapter; hence an *ethnography* is most appropriate.
2. A *content analysis* is called for here—in particular, a systematic sampling and analysis of television commercials that are broadcast within a specified time period.
3. By focusing on three specific examples of a grassroots political party, the researcher is presumably intending to conduct a *multiple case study.*
4. The focus here is on how adolescents *perceive* their situation, making a *phenomenological study* especially relevant to the research problem.
5. Because the research question involves a process—human interaction—and very little literature exists to shed light on the question, a *grounded theory* study is probably in order here.

Now go to MyEducationLab at www.myeducationlab.com to take assessments to evaluate your mastery of chapter concepts. Assignments and Activities exercises and Building Skills in Reading Research exercises are also available to help you master concepts and skills. Feedback for many of these exercises is provided so that you can see why your answers are correct or incorrect.