

1

A Model for Qualitative Research Design

In 1625, Gustav II, the king of Sweden, commissioned the construction of four warships to further his imperialistic goals. The most ambitious of these ships, named the *Vasa*, was one of the largest warships of its time, with 64 cannons arrayed in two gundecks. On August 10, 1628, the *Vasa*, resplendent in its brightly painted and gilded woodwork, was launched in Stockholm Harbor with cheering crowds and considerable ceremony. The cheering was short-lived, however; caught by a gust of wind while still in the harbor, the ship suddenly heeled over, foundered, and sank.

An investigation was immediately ordered, and it became apparent that the ballast compartment had not been made large enough to balance the two gundecks that the king had specified. With only 121 tons of stone ballast, the ship lacked stability. However, if the builders had simply added more ballast, the lower gundeck would have been brought dangerously close to the water; the ship lacked the buoyancy to accommodate that much weight.

In more general terms, the *design* of the *Vasa*—the ways in which the different components of the ship were planned and constructed in relation to one another—was fatally flawed. The ship was carefully built, meeting all of the existing standards for solid workmanship, but key characteristics of its different parts—in particular, the weight of the gundecks and ballast and the size of the hold—were not compatible, and the interaction of these characteristics caused the ship to capsize. Shipbuilders of that day did not have a general theory of ship design; they worked primarily from traditional models and by trial and error, and had no way to calculate stability. Apparently, the *Vasa* was originally planned as a smaller ship, and was then scaled up, at the king's insistence, to add the second gundeck, leaving too little room in the hold (Kvarning, 1993).

This story of the *Vasa* illustrates the general concept of design that I am using here: “an underlying scheme that governs functioning, developing, or unfolding” and “the arrangement of elements or details in a product or work of art” (*Webster's Ninth New Collegiate Dictionary*, 1984). This is the ordinary, everyday meaning of the term, as illustrated by the following quote from a clothing catalog:

It starts with design. . . . We carefully consider every detail, including the cut of the clothing, what style of stitching works best with the fabric, and what kind of closures make the most sense—in short, everything that contributes to your comfort. (L.L.Bean, 1998)

A good design, one in which the components work harmoniously together, promotes efficient and successful functioning; a flawed design leads to poor operation or failure.

Surprisingly, most works dealing with *research* design use a different conception of design: “a plan or protocol for carrying out or accomplishing something (esp. a scientific experiment)” (*Webster’s Ninth New Collegiate Dictionary*, 1984). They present design as a series of stages or tasks in planning or conducting a study. While some versions of this view of design are circular and recursive (e.g., Marshall & Rossman, 1999, pp. 26–27), all are essentially linear in the sense of being a one-directional *sequence* of steps from problem formulation to conclusions or theory, though this sequence may be repeated. Such models usually resemble a flowchart, with a clear starting point and goal and a specified order for performing the intermediate tasks.¹

Such sequential models are not a good fit for qualitative research, in which any component of the design may need to be reconsidered or modified during the study in response to new developments or to changes in some other component. In a qualitative study, “research design should be a reflexive process operating through every stage of a project” (Hammersley & Atkinson, 1995, p. 24). The activities of collecting and analyzing data, developing and modifying theory, elaborating or refocusing the research questions, and identifying and addressing validity threats are usually all going on more or less simultaneously, each influencing all of the others. This process isn’t adequately represented by a linear model, even one that allows multiple cycles, because in qualitative research there isn’t an unvarying order in which the different tasks or components must be arranged.

Traditional, linear approaches to design provide a model *for* conducting the research—a prescriptive guide that arranges the tasks involved in planning or conducting a study in what is seen as an optimal order. In contrast, the model in this book is a model *of* as well as *for* research. It is intended to help you understand the *actual* structure of your study, as well as to plan this study and carry it out. An essential feature of this model is that it treats research design as a real entity, not simply an abstraction or plan. Borrowing Kaplan’s (1964, p. 8) distinction between the “logic-in-use” and “reconstructed logic” of research, this model can be used to represent the “design-in-use” of a study, the *actual* relationships among the components of the research, as well as the intended (or reconstructed) design (Maxwell & Loomis, 2002). The design

of your research, like the design of the *Vasa*, is real and will have real consequences. As Yin stated, “every type of empirical research has an implicit, if not explicit, research design” (1994, p. 19). Because a design always exists, it is important to *make* it explicit, to get it out in the open where its strengths, limitations, and consequences can be clearly understood.

This conception of design as a model of, as well as for, research is exemplified in a classic qualitative study of medical students (Becker, Geer, Hughes, & Strauss, 1961). The authors began their chapter on the “design of the study” by stating that

In one sense, our study had no design. That is, we had no well-worked-out set of hypotheses to be tested, no data-gathering instruments purposely designed to secure information relevant to these hypotheses, no set of analytic procedures specified in advance. Insofar as the term “design” implies these features of elaborate prior planning, our study had none.

If we take the idea of design in a larger and looser sense, using it to identify those elements of order, system, and consistency our procedures did exhibit, our study had a design. We can say what this was by describing our original view of the problem, our theoretical and methodological commitments, and the way these affected our research and were affected by it as we proceeded. (1961, p. 17)

Thus, to design a study, particularly a qualitative study, you can’t just develop (or borrow) a logical strategy in advance and then implement it faithfully. Design in qualitative research is an ongoing process that involves “tackling” back and forth between the different components of the design, assessing the implications of goals, theories, research questions, methods, and validity threats for one another.² It does not begin from a predetermined starting point or proceed through a fixed sequence of steps, but involves interconnection and interaction among the different design components. In addition, as Frank Lloyd Wright emphasized, the design of something must fit not only with its use, but also with its environment. You will need to continually assess how this design is actually working during the research, how it influences and is influenced by its environment, and to make adjustments and changes so that your study can accomplish what you want.

My model of research design, which I call an “interactive” model (I could just as well have called it “systemic”), has a definite structure. However, it is an interconnected and flexible structure. In this book, I describe the key components of a research design, and present a strategy for creating coherent and workable relationships among these components. I also provide (in Chapter 7) an explicit plan for moving from your design to a research proposal.

The model I present here has five components, which I characterize below in terms of the concerns that each is intended to address:

1. *Goals.* Why is your study worth doing? What issues do you want it to clarify, and what practices and policies do you want it to influence? Why do you want to conduct this study, and why should we care about the results?

2. *Conceptual Framework.* What do you think is going on with the issues, settings, or people you plan to study? What theories, beliefs, and prior research findings will guide or inform your research, and what literature, preliminary studies, and personal experiences will you draw on for understanding the people or issues you are studying?

3. *Research Questions.* What, specifically, do you want to understand by doing this study? What do you *not* know about the phenomena you are studying that you want to learn? What questions will your research attempt to answer, and how are these questions related to one another?

4. *Methods.* What will you actually do in conducting this study? What approaches and techniques will you use to collect and analyze your data? There are four parts of this component of your design: (1) the relationships that you establish with the participants in your study; (2) your selection of settings, participants, times and places of data collection, and other data sources such as documents (what is often called “sampling”); (3) your data collection methods; and (4) your data analysis strategies and techniques.

5. *Validity.* How might your results and conclusions be wrong? What are the plausible alternative interpretations and validity threats to these, and how will you deal with these? How can the data that you have, or that you could potentially collect, support or challenge your ideas about what’s going on? Why should we believe your results?

These components are not substantially different from the ones presented in many other discussions of research design (e.g., LeCompte & Preissle, 1993; Miles & Huberman, 1994; Robson, 2002; Rudestam & Newton, 1992, p. 5). What is innovative is the way the relationships among the components are conceptualized. In this model, the different parts of a design form an integrated and interacting whole, with each component closely tied to several others, rather than being linked in a linear or cyclic sequence. The most important relationships among these five components are displayed in Figure 1.1.

There are also connections other than those emphasized here, some of which I have indicated by dashed lines. For example, if a goal of your study is to empower participants to conduct their own research on issues that matter to them, this will shape the methods you use, and, conversely, the methods that are feasible in your study will constrain your goals. Similarly, the theories and intellectual traditions you are drawing on in your research will have implications for what validity threats you see as most important and vice versa.

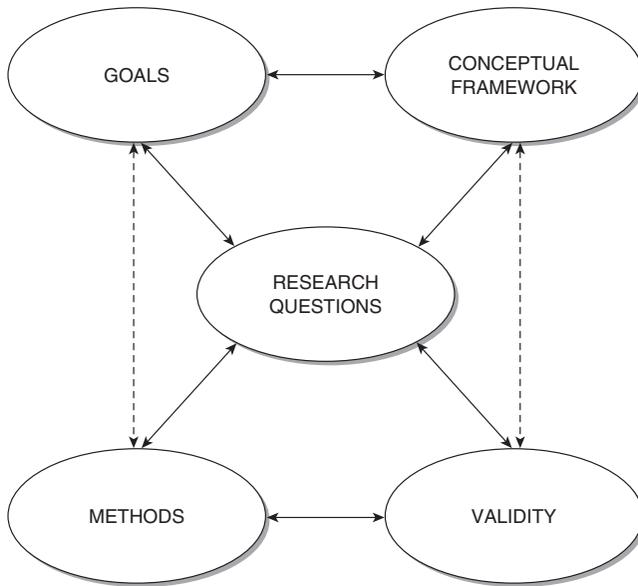


Figure 1.1 An Interactive Model of Research Design

The upper triangle of this model should be a closely integrated unit. Your research questions should have a clear relationship to the goals of your study, and should be informed by what is already known about the phenomena you are studying and the theoretical concepts and models that can be applied to these phenomena. In addition, the goals of your study should be informed by current theory and knowledge, while your decisions about what theory and knowledge are relevant depend on your goals and questions.

Similarly, the bottom triangle of the model should also be closely integrated. The methods you use must enable you to answer your research questions, and also to deal with plausible validity threats to these answers. The questions, in turn, need to be framed so as to take the feasibility of the methods and the seriousness of particular validity threats into account, while the plausibility and relevance of particular validity threats, and the ways these can be dealt with, depend on the questions and methods chosen. The research questions are the heart, or hub, of the model; they connect all of the other components of the design, and should inform, and be sensitive to, these components.

The connections among the different components of the model are not rigid rules or fixed implications; they allow for a certain amount of “give” and

elasticity in the design. I find it useful to think of them as rubber bands. They can stretch and bend to some extent, but they exert a definite tension on different parts of the design, and beyond a particular point, or under certain stresses, they will break. This “rubber band” metaphor portrays a qualitative design as something with considerable flexibility, but in which there are constraints imposed by the different parts on one another, constraints which, if violated, make the design ineffective.

There are many other factors besides these five components that will influence the design of your study; these include your resources, research skills, perceived problems, ethical standards, the research setting, and the data you collect and results you draw from these data. In my view, these are not part of the *design* of a study, but either belong to the *environment* within which the research and its design exist or are *products* of the research. You will need to take these factors into account in designing your study, just as the design of a ship needs to take into account the kinds of winds and waves the ship will encounter and the sorts of cargo it will carry. Figure 1.2 presents some of the factors in the environment that can influence the design and conduct of a study, and displays

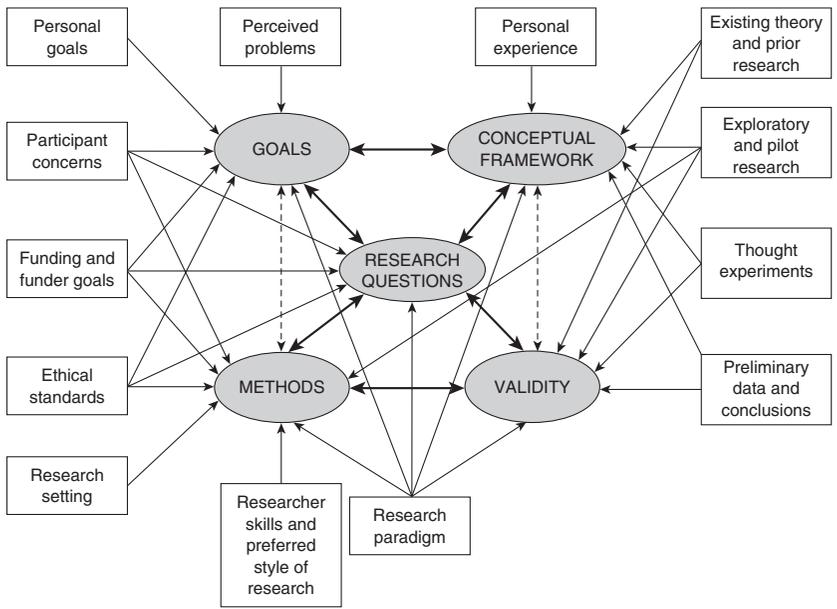


Figure 1.2 Contextual Factors Influencing a Research Design

some of the key linkages of these factors with components of the research design. These factors and linkages will be discussed in subsequent chapters.

I want to say something specifically about ethics, since I have not identified it as a separate component of research design. This isn't because I don't think ethics is important for qualitative design; on the contrary, attention to ethical issues in qualitative research is being increasingly recognized as essential (Christians, 2000; Denzin & Lincoln, 2000; Fine, Weis, Weseen, & Wong, 2000). Instead, it is because I believe that ethical concerns should be involved in *every* aspect of design. I have particularly tried to address these concerns in relation to methods, but they are also relevant to your goals, the selection of your research questions, validity concerns, and the critical assessment of your conceptual framework.

As the subtitle of this book indicates, my approach to design is an interactive one. It is interactive in three senses. First, the design model itself is interactive; each of the components has implications for the other components, rather than the components being in a linear, one-directional relationship with one another. Second, the design of a qualitative study should be able to change in response to the circumstances under which the study is being conducted, rather than simply being a fixed determinant of research practice. (Example 1.1 illustrates both of these interactive processes in the evolution of the design of one study.) Finally, the learning process embodied in this book is interactive, with frequent exercises that enable you to work on the design of your own study. This book does not simply present abstract research design principles that you can memorize and then later use in your research. You *will* learn generalizable principles, but you'll learn these best by creating a design for a particular qualitative project.

EXAMPLE 1.1

The Evolution of a Research Design

Maria Broderick began her dissertation study of a hospital-based support group for cancer patients with a theoretical background in adult psychological development and practical experience in the design of such programs; a research interest in discovering how patients' perceptions of support and interaction within the group were related to their developmental level; a plan to use observation, interviews, and developmental tests to answer this question; and the goals of improving such programs and developing a career in clinical practice. However, after her proposal was approved, she lost access to the group she had originally planned to

study, and was unable to find another suitable cancer program. She ended up negotiating permission to study a stress-reduction program for patients in a hospital setting, but was not allowed to observe the classes; in addition, the program team insisted on a quasi-experimental research design, with pre- and postintervention measures of patients' developmental level and experiences. This forced her both to broaden her theoretical framework beyond cancer support programs to behavioral medicine programs in general and to alter her methods to rely primarily on pre- and postinterviews and developmental tests.

As Maria was beginning her research, she herself was diagnosed with a stress-related illness. This had a profound effect on the research design. First, she gained access to the program as a patient, and discovered that it wasn't actually run as a support program, but in a traditional classroom format. This made her extensive literature review on support groups largely irrelevant. Second, she found that her own experiences of her illness and what seemed to help her deal with stress differed substantially from what was reported in the literature. These two developments profoundly altered her conceptual framework and research questions, shifting her theoretical focus from ego development to cognitive development, adult learning, and educational theory. In addition, she found that pretesting of the patients was impossible for practical reasons, eliminating the possibility of quasi-experimental assessment of patient changes and shifting her methods and validity checks back toward her original plans.

While Maria was analyzing her data, her gradual creation of a theory that made sense of these patients' (and her own) experiences directed her to new bodies of literature and theoretical approaches. Her increasing focus on what the patients *learned* through the program caused her to see meditation and cognitive restructuring as tools for reshaping one's view of stress, and led her to develop a broader view of stress as a cultural phenomenon. It also reconnected her with her longtime interest in nontraditional education for adults. Finally, these changes led to a shift in her career goals from clinical practice to an academic position, and her goals for the study came to emphasize relating adult developmental theory to empowerment curricula and improving adult education in nontraditional settings.

One way in which the design model presented here can be useful is as a tool or template for conceptually mapping the design of an actual study, either as part of the design process or in analyzing the design of a completed study. This involves filling in the circles for the five components of the model with the

A MODEL FOR QUALITATIVE RESEARCH DESIGN

9

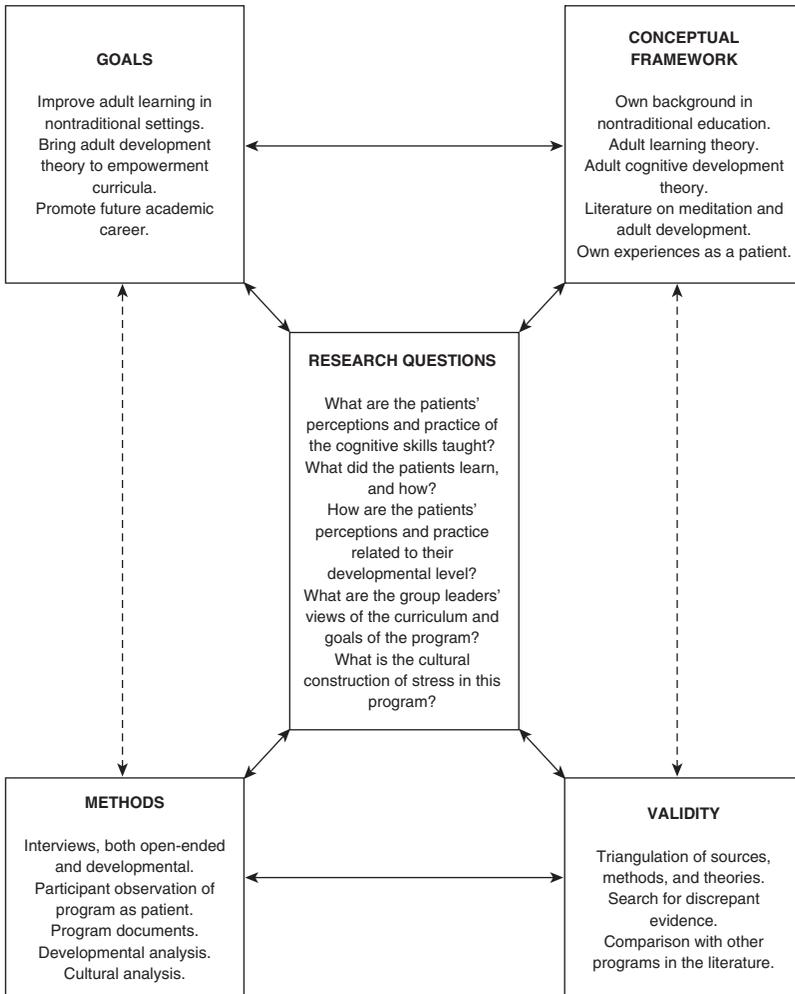


Figure 1.3 The Design of Maria Broderick's Dissertation Research

specific components of that study's design, a strategy that I call a "design map." Figure 1.3 is a design map of the eventual structure of Maria Broderick's dissertation research; see Maxwell and Loomis (2002) for other such maps.

I do not believe that there is one right model of, or for, research design. However, I think that the model that I present here is a useful model for two main reasons:

1. It explicitly identifies as *components* of design the key issues about which you will need to make decisions and which will need to be addressed in your research proposal. These components are therefore less likely to be overlooked or misunderstood, and can be dealt with in a systematic manner.
2. It emphasizes the *interactive* nature of design decisions in qualitative research and the multiple connections among design components. A common reason that dissertation or funding proposals are rejected is because they do not make clear the logical connections among the design components, and the model I present here makes it easier to understand and demonstrate these connections.

A good design for your study, like a good design for a ship, will help it to safely and efficiently reach its destination. A poor design, one in which the components are not well integrated or are incompatible, will at best be inefficient, and at worst will fail to achieve its goals.

THE ORGANIZATION OF THIS BOOK

This book is structured to guide you through the process of designing a qualitative study. It highlights the issues for which design decisions must be made, and presents some of the considerations that should inform these decisions. Each chapter in the book deals with one component of design, and these chapters form a logical sequence. However, this organization is only a conceptual and presentational device, not a procedure to follow in designing an actual study. You should make decisions about each component in light of your thinking about all of the other components, and you may need to modify previous design decisions in response to new information or changes in your thinking.

This book takes a Z-shaped path (Figure 1.4) through the components of this model, beginning with goals (Chapter 2). The goals of your study are not only important, but also primary; if your reasons for doing the study aren't clear, it can be difficult to make *any* decisions about the rest of the design. Your conceptual framework (Chapter 3) is discussed next, both because it should connect closely to your goals and because the goals and framework jointly have a major influence on the formulation of research questions for the study. Your research questions (Chapter 4) are thus a logical next topic; these three components should form a coherent unit.

The next component discussed is methods (Chapter 5): how you will actually collect and analyze the data to answer your research questions. However, these methods and analyses need to be connected to issues of validity (Chapter 6): how you might be wrong, and what would make your answers more believable than alternative possible answers. Research questions, methods, and validity also

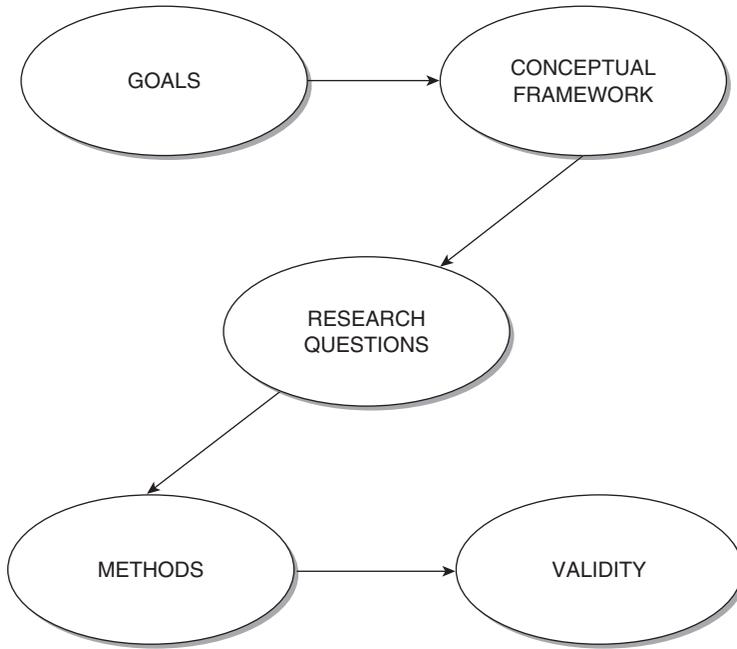


Figure 1.4 The Organization of This Book

should form an integrated unit, one in which the methods for obtaining answers to the questions, and the means for assuring the credibility of the potential answers in the face of plausible validity threats, are clearly conceptualized and linked to the research questions.

Finally, Chapter 7 discusses the implications of my model of design for developing research proposals, and provides a map and guidelines for how to get from one to the other.

THE EXERCISES IN THIS BOOK

C. Wright Mills wrote that

One of the very worst things that happens to social scientists is that they feel the need to write of their “plans” on only one occasion: when they are going to ask for money for a specific piece of work or “a project.” It is as a request for funds

that most planning is done, or at least carefully written about. However standard the practice, I think this very bad: it is bound in some degree to be salesmanship, and, given prevailing expectations, very likely to result in painstaking pretensions; the project is likely to be “presented,” rounded out in some manner long before it ought to be; it is often a contrived thing, aimed at getting the money for ulterior purposes, however valuable, as well as for the research presented. A practicing social scientist ought periodically to review “the state of my problems and plans.” (Mills, 1959, p. 197).

He went on to make an eloquent plea that each researcher write regularly and systematically about his or her research, “just for himself and perhaps for discussion with friends” (p. 198), and to keep a file of these writings, which qualitative researchers usually call “memos.”

All of the exercises in this book are memos of one sort or another, and I want to briefly discuss the nature of memos and how to use them effectively. Memos (sometimes called “analytic memos”) are an extremely versatile tool that can be used for many different purposes. This term refers to any writing that a researcher does in relationship to the research other than actual field notes, transcription, or coding. A memo can range from a brief marginal comment on a transcript or a theoretical idea recorded in a field journal to a full-fledged analytic essay. What all of these have in common is that they are ways of getting ideas down on paper (or in a computer), and of using this writing as a way to facilitate reflection and analytic insight. When your thoughts are recorded in memos, you can code and file them just as you do your field notes and interview transcripts, and return to them to develop the ideas further. Not writing memos is the research equivalent of having Alzheimer’s disease; you may not remember your important insights when you need them. Peters (1992, p. 123) cited Lewis Carroll’s *Through the Looking Glass* on this function of memos:

“The horror of that moment,” the King went on, “I shall never, *never* forget.”
“You will, though,” said the Queen, “unless you make a memorandum of it.”

Many of the examples used in this book are memos, or are based on memos.³

Memos are one of the most important techniques you have for developing your own ideas. You should therefore think of memos as a way to help you *understand* your topic, setting, or study, not just as a way of recording or presenting an understanding you’ve already reached. Memos should include reflections on your reading and ideas as well as your fieldwork. Memos can be written on methodological issues, ethics, personal reactions, or anything else; I wrote numerous memos about research design during the writing and revising of this book. Write memos as a way of working on a problem you encounter in

making sense of your topic, setting, study, or data. Write memos whenever you have an idea that you want to develop further, or simply to record the idea for later development. Write *lots* of memos throughout the course of your research project; remember that in qualitative research, design is something that goes on during the entire study, not just at the beginning. Think of memos as a kind of decentralized field journal; if you prefer, you can write your memos in an actual journal.

Whatever form these memos take, their value depends on two things. The first is that you engage in serious reflection, analysis, and self-critique, rather than just mechanically recording events and thoughts. The second is that you *organize* your memos in a systematic, retrievable form, so that the observations and insights can easily be accessed for future examination. I do my own memo writing primarily in two forms: on 3×5 cards, which I always carry with me for jotting down ideas and which I index by date and topic, and in computer files relating to particular projects, which I use for longer memos. During my dissertation research in an Inuit community in northern Canada, I also kept a field journal, which was invaluable in making sense of my personal responses to the research situation. It can also be very useful to share some of your memos with colleagues or fellow students for their feedback.⁴

Although memos are primarily a tool for thinking, they can also serve as an initial draft of material that you will later incorporate (usually with substantial revision) in a proposal, report, or publication, and I've tried to design most of the memo exercises in this book so that they can be used in this way. However, thinking of memos primarily as a way of communicating to *other* people will usually interfere with the kind of reflective writing that you need to do to make memos most useful to you. In particular, beware of what Becker (1986) called "classy writing"—pretentious and verbose language that is intended to impress others rather than to clarify your ideas. A saying among writing instructors is, "When you write, don't put a tuxedo on your brain" (Metzger, 1993).

NOTES

1. A third definition treats designs as distinct, standard arrangements of research methods that have their own coherence and logic, as possible answers to the question, "What research design are you using?" For example, a randomized, double-blind experiment is one research design; a qualitative case study is another. For several reasons, this typological conception of design is not particularly helpful in qualitative research. First, few qualitative studies lend themselves to such "off-the-rack" approaches; as discussed throughout this book, qualitative design needs to be inductive, flexible, and tailored to the specific situation being studied. Second, typological approaches to

design generally deal explicitly only with methods, and neither address the other components of design (in my model, goals, conceptual frameworks, research questions, and validity) nor clarify the actual functioning and interrelationship of the parts of a design. For a more detailed analysis of the strengths and limitations of typological approaches to design, see Maxwell and Loomis (2002).

2. This tacking back and forth is similar in some ways to the “hermeneutic circle” of textual interpretation (Geertz, 1974). However, I am advocating an interactive rather than a sequential model of research design primarily because I see design as pertaining to the actual relationships of the components of a research study, not because I take an “interpretive” or “humanistic” as opposed to a “scientific” view of research. The interactive model I present here is drawn to a significant extent from research practices in the natural sciences, particularly biology, and is applicable to quantitative as well as qualitative research (Maxwell & Loomis, 2002). In contrast, Janesick (1994), who saw qualitative research design as an interpretive art form analogous to dance, nevertheless stated that “qualitative research design begins with a question” (p. 210) and presented research design as a sequence of decisions that the researcher will need to make at each stage of the research.

3. For additional discussion and examples of what a memo involves, see Bogdan and Biklen (2003, pp. 114–116, 151–157), Miles and Huberman (1994, pp. 72–75), and Mills (1959). More detailed information on memos can be found in Strauss (1987, chaps. 1, 5, and 6) and Strauss and Corbin (1990, chap. 12).

4. See Mills (1959) for advice on how to use memos in developing a research agenda and career.