



A Framework for the Study

The design of a study begins with the selection of a topic and a paradigm. Paradigms in the human and social sciences help us understand phenomena: They advance assumptions about the social world, how science should be conducted, and what constitutes legitimate problems, solutions, and criteria of "proof" (Firestone, 1978; Gioia & Pitre, 1990; Kuhn, 1970). As such, paradigms encompass both theories and methods. Although they evolve, differ by discipline fields, and often are contested (Phillips, 1987), two are discussed widely in the literature: the qualitative and the quantitative paradigms (Phillips, 1987; Reichardt & Cook, 1979; Webb, Beals, & White, 1986). In this book a **qualitative study** is designed to be consistent with the assumptions of a qualitative paradigm. This study is defined as an inquiry process of understanding a social or human problem,

based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting. Alternatively a **quantitative study**, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true.

In this chapter I address the selection of a paradigm and a format for pursuing the methodology—the process of research—within the paradigm. First, however, one needs to begin by selecting a focus for the study.

A FOCUS FOR THE STUDY

The *focus* for a study is the central concept being examined in a scholarly study. It may emerge through an extensive literature review, be suggested by colleagues, researchers, or advisors, or be developed through practical experiences.

▼ *Focus the topic by describing it succinctly, drafting a working title, and considering whether it is researchable.* In a single sentence try to describe the focus concisely. Complete the following sentence: "My study is about . . ." Possible responses: "My study is about at-risk children in the junior high," "My study is about helping college faculty become better researchers." At this stage in the design, frame the answer to the question so that another scholar might grasp easily the meaning of the project. A common shortcoming of beginning researchers is that they frame their study in complex and erudite language. This perspective may result from reading published articles that have undergone numerous revisions before being set in print. Good, sound research projects begin with straightforward, uncomplicated thoughts, easily read and understood.

Drafting a working title for the study will help focus the direction of research. Although some would suggest that the title be saved

for last, I recommend a working draft at this time to position the central concept before the writer at an early stage. Undoubtedly this working title will be modified as one proceeds with a project.

Wilkinson (1991) provided useful advice for creating a title: Be brief and avoid wasting words. Eliminate unnecessary words such as "An Approach to . . ." and "A Study of . . ." Use a single title or a double title. An example of a double title: "An Ethnography: Understanding a Child's Perception of War." In addition to Wilkinson's thoughts, consider a title no longer than 12 words, eliminate most articles and prepositions, and make sure it includes the focus or topic of the study.

Next consider whether this topic is researchable. One needs criteria for making this decision. Below are questions often asked by individuals as they plan a study:

Is the topic researchable, given time, resources, and availability of data?

Is there a personal interest in the topic in order to sustain attention?

Will the results from the study be of interest to others (e.g., in the state, region, nation)?

Is the topic likely to be publishable in a scholarly journal? (or attractive to a doctoral committee?)

Does the study (a) fill a void, (b) replicate, (c) extend, or (d) develop new ideas in the scholarly literature?

Will the project contribute to career goals?

Before proceeding with a study, one needs to weigh these factors and to ask others for their reactions to a topic. Seek reactions from colleagues, noted authorities in the field, academic advisors, and faculty committee members and colleagues.

A PARADIGM FOR THE STUDY

The Two Paradigms

Once one is comfortable proceeding with a specific focus, the next decision involves selecting an overall paradigm for the study. I present two choices—the qualitative and the quantitative—that have roots in 20th-century philosophical thinking.

The **quantitative** is termed the traditional, the positivist, the experimental, or the empiricist paradigm. The quantitative thinking comes from an empiricist tradition established by such authorities as Comte, Mill, Durkheim, Newton, and Locke (J. Smith, 1983). The **qualitative** paradigm is termed the constructivist approach or naturalistic (Lincoln & Guba, 1985), the interpretative approach (J. Smith, 1983), or the postpositivist or postmodern perspective (Quantz, 1992). It began as a countermovement to the positivist tradition in the late 19th century through such writers as Dilthey, Weber, and Kant (J. Smith, 1983).

Assumptions of the Paradigms

To understand the assumptions of each paradigm, writers have contrasted them on several dimensions (Firestone, 1987; Guba & Lincoln, 1988; McCracken, 1988). Although these contrasts are a heuristic device (seldom do actual studies exemplify all of the ideal characteristics of either paradigm), they bring into stark contrast the nature of alternative strategies (Patton, 1988). Table 1.1 displays assumptions of quantitative and qualitative paradigms based on ontological, epistemological, axiological, rhetorical, and methodological approaches. It is important to understand these assumptions because they will provide direction for designing all phases of a research study (in the chapters to follow).

On the **ontological** issue of what is real, the **quantitative** researcher views reality as "objective," "out there" independent of the researcher. Something can be measured objectively by using a questionnaire or an instrument. For the **qualitative** researcher, the only reality is that constructed by the individuals involved in the research situation. Thus multiple realities exist in any given situation: the

Table 1.1 Quantitative and Qualitative Paradigm Assumptions

| <i>Assumption</i> | <i>Question</i> | <i>Quantitative</i> | <i>Qualitative</i> |
|----------------------------|--|--|---|
| Ontological Assumption | What is the nature of reality? | Reality is objective and singular, apart from the researcher. | Reality is subjective and multiple as seen by participants in a study. |
| Epistemological Assumption | What is the relationship of the researcher to that researched? | Researcher is independent from that being researched. | Researcher interacts with that being researched. |
| Axiological Assumption | What is the role of values? | Value-free and unbiased | Value-laden and biased |
| Rhetorical Assumption | What is the language of research? | Formal Based on set definitions Impersonal voice Use of accepted quantitative words Deductive process Cause and effect Static design—categories isolated before study Context-free Generalizations leading to prediction, explanation, and understanding Accurate and reliable through validity and reliability | Informal Evolving decisions Personal voice Accepted qualitative words Inductive process Mutual simultaneous shaping of factors Emerging design—categories identified during research process Context-bound Patterns, theories developed for understanding Accurate and reliable through verification |
| Methodological Assumption | What is the process of research? | | |

SOURCE: Based on Firestone (1987), Guba & Lincoln (1988), and McCracken (1988).

researcher, those individuals being investigated, and the reader or audience interpreting a study. The qualitative researcher needs to report faithfully these realities and to rely on voices and interpretations of informants.

On the **epistemological** question, the relationship of the researcher to that being researched, the two paradigms also differ. The **quantitative** approach holds that the researcher should remain distant and independent of that being researched. Thus in surveys and experiments, researchers attempt to control for bias, select a systematic sample, and be "objective" in assessing a situation. The **qualitative** stance is different: Researchers interact with those they study, whether this interaction assumes the form of living with or observing informants over a prolonged period of time, or actual collaboration. In short, the researcher tries to minimize the distance between him- or herself and those being researched. This response has implications, too, for the **axiological** issue of the role of values in a study. The researcher's values are kept out of the study in a **quantitative** project. This feat is accomplished through entirely omitting statements about values from a written report, using impersonal language, and reporting the "facts"—arguing closely from the evidence gathered in the study. The major difference between this approach and that of the **qualitative** researcher is that the qualitative investigator admits the value-laden nature of the study and actively reports his or her values and biases, as well as the value nature of information gathered from the field. The language of the study may be first person and personal.

Another distinction is the **rhetoric**, or language of the research. When a **quantitative** researcher writes a study, the language should be not only impersonal and formal but also based on accepted words such as *relationship*, *comparison*, and *within-group*. Concepts and variables are well defined from accepted definitions. This orientation marks a quantitative study. Different words mark **qualitative** studies; authors of qualitative texts during the 1980s (e.g., Lincoln & Guba, 1985) constructed a language distinct from the traditional research language in order to emphasize the qualitative paradigm. Such words as *understanding*, *discover*, and *meaning* formed the glossary of emerging qualitative terms. Moreover, the

language of qualitative studies became personal, informal, and based on definitions that evolved during a study.

From these distinctions about reality, the relationship between the researcher and that researched, the role of values, and the rhetoric of the study has emerged a **methodology**—the entire process of a study—that differs too. One approaches a **quantitative** methodology by using a deductive form of logic wherein theories and hypotheses are tested in a cause-and-effect order. Concepts, variables, and hypotheses are chosen before the study begins and remain fixed throughout the study (in a static design). One does not venture beyond these predetermined hypotheses (the research is context free). The intent of the study is to develop generalizations that contribute to the theory and that enable one to better predict, explain, and understand some phenomenon. These generalizations are enhanced if the information and instruments used are valid and reliable. Alternatively, in a **qualitative** methodology inductive logic prevails. Categories emerge from informants, rather than are identified *a priori* by the researcher. This emergence provides rich “context-bound” information leading to patterns or theories that help explain a phenomenon. The question about the accuracy of the information may not surface in a study, or, if it does, the researcher talks about steps for verifying the information with informants or “triangulating” among different sources of information, to mention a few techniques available.

A Single Paradigm

- ▼ *Identify a single research paradigm for the overall design of the study.* Although in Chapter 10 I address combined paradigm designs, compelling reasons exist for a single paradigm at this time. Pragmatically, to use both paradigms adequately and accurately consumes more pages than journal editors are willing to allow and extends dissertation studies beyond normal limits of size and scope. By examining studies in journals that employ combined paradigms, one can see that they tend to be funded projects with multiple investigators collecting data over an extended period of time. Using both paradigms in a single study can be expensive, time-consuming, and lengthy

(Locke, Spirduso, & Silverman, 1987). Also researchers (and faculty) seldom are trained in the skills necessary to conduct studies from more than one paradigm; individuals learn one paradigm, and this perspective becomes the dominant view in their research.

Criteria for Selection

How, then, does one choose between the qualitative and the quantitative paradigms? **Table 1.2** presents five criteria that illustrate factors to consider.

Researchers bring to a study a **worldview**, an outlook, that favors the qualitative or quantitative ontological, epistemological, axiological, rhetorical, and methodological assumptions. For example, some individuals see reality as subjective and want a close interaction with informants. Others may be more comfortable with an objective stance using survey or experimental instruments. Undoubtedly this worldview may be affected by a second factor—**training or experiences**. An individual trained in technical, scientific writing, statistics, or computer statistical programs and familiar with quantitative journals in the library would choose the quantitative paradigm. The qualitative approach incorporates much more of a literary form of writing than the quantitative approach. Library experiences with qualitative journals and texts are important to provide illustrations of good writing. With the advent of qualitative computer software programs, experience in using these, too, is an asset for those choosing the qualitative approach.

Another factor is **psychological attributes**. Because quantitative studies are the traditional mode of research, carefully worked-out procedures and rules exist for the research. In addition, collecting information and analyzing data from surveys or from instruments in an experimental design involve a shorter period of time than that required of qualitative designs. Hence a researcher who engages in a quantitative study seeks out this paradigm because it offers a low-risk, fixed method of research without ambiguities and possible frustrations. This researcher also would have a shorter time for the study. Alternatively the qualitative design is one in which the "rules" and procedures are not fixed, but rather are open and

Table 1.2 Reasons for Selecting a Paradigm

| <i>Criteria</i> | <i>Quantitative Paradigm</i> | <i>Qualitative Paradigm</i> |
|---|--|---|
| Researcher's Worldview | A researcher's comfort with the ontological, epistemological, axiological, rhetorical, and methodological assumptions of the quantitative paradigm | A researcher's comfort with the ontological, epistemological, axiological, rhetorical, and methodological assumptions of the qualitative paradigm |
| Training and Experience of the Researcher | Technical writing skills; computer statistical skills; library skills | Literary writing skills; computer text-analysis skills; library skills |
| Researcher's Psychological Attributes | Comfort with rules and guidelines for conducting research; low tolerance for ambiguity; time for a study of short duration | Comfort with lack of specific rules and procedures for conducting research; high tolerance for ambiguity; time for lengthy study |
| Nature of the Problem | Previously studied by other researchers so that body of literature exists; known variables; existing theories | Exploratory research; variables unknown; context important; may lack theory base for study |
| Audience for the Study (e.g., journal editors and readers, graduate committees) | Individuals accustomed to/supportive of quantitative studies | Individuals accustomed to/supportive of qualitative studies |

value-laden judgments to challenge research, policy, and other forms of human activity (Thomas, 1993). Critical ethnographers attempt to aid emancipatory goals, negate repressive influences, raise consciousness, and invoke a call to action that potentially will lead to social change.

Grounded theory, in which the researcher attempts to derive a theory by using multiple stages of data collection and the refinement and interrelationship of categories of information (Strauss & Corbin, 1990). Two primary characteristics of this design are the constant comparison of data with emerging categories, and theoretical sampling of different groups to maximize the similarities and the differences of information.

Case studies, in which the researcher explores a single entity or phenomenon ("the case") bounded by time and activity (a program, event, process, institution, or social group) and collects detailed information by using a variety of data collection procedures during a sustained period of time (Merriam, 1988; Yin, 1989).

Phenomenological studies, in which human experiences are examined through the detailed descriptions of the people being studied. Understanding the "lived experiences" marks phenomenology as a philosophy based on the works of Husserl, Heidegger, Schuler, Sartre, and Merleau-Ponty (Nieswiadomy, 1993), as much as it is a method of research. As a method the procedure involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning (Dukes, 1984; Oiler, 1986). Through this process the researcher "brackets" his or her own experiences in order to understand those of the informants (Nieswiadomy, 1993).

A FORMAT FOR COMPOSING SECTIONS

Assuming that one has a paradigm for the guiding methodology in the study and a method type within this paradigm, the next step is to conceptualize a format for the entire study.

- ▼ *Select a format for the overall design of the study.* The format for a **quantitative** study conforms to standards easily identified in journal articles and research studies. The form generally follows the model of an introduction, a literature review, methods, results, and discussion. In planning a **quantitative** study and designing a dissertation proposal, consider the following three-part format to sketch the overall plan:

Example 1. Quantitative Format

Introduction

Context (Statement of the Problem)

Purpose of the Study

Research Questions or Objectives or Hypotheses

Theoretical Perspective

Definition of Terms

Delimitations and Limitations of the Study

Significance of the Study

Review of the Literature

Methods

Research Design

Sample, Population, or Subjects

Instrumentation and Materials

Variables in the Study

Data Analysis

Appendices: Instruments

The plan shown in Example 1 is a standard format for a social science study, although the order of the sections, especially in the introduction, may vary from study to study (see Miller, 1991; Rudestam & Newton, 1992). It presents a useful model for designing the sections of a plan for a dissertation or sketching the topics to be addressed in a scholarly study.

The format is much less standardized in **qualitative** designs than quantitative designs. A fundamental characteristic, however, should be that the design is consistent with the qualitative paradigm

assumptions. Moreover, with qualitative research relatively new on the landscape of human and social science research, the design ideally should convey a strong rationale for the choice of a qualitative design. In light of these points, I propose two alternative models. Example 2 is one I have used, and Example 3 is recommended by Marshall and Rossman (1989):

Example 2. Qualitative Format

Introduction

Statement of the Problem

Purpose of the Study

The Grand Tour Question and Subquestions

Definitions

Delimitations and Limitations

Significance of the Study

Procedure

Assumptions and Rationale for a Qualitative Design

The Type of Design Used

The Role of the Researcher

Data Collection Procedures

Data Analysis Procedures

Methods for Verification

Outcome of the Study and Its Relation to Theory and Literature

Appendices

Example 3. Qualitative Format (Marshall & Rossman, 1989)

Introduction and General Questions or Topic

Significance of the Research

Site and Sample Selections

Researcher's Role in Management, Including Entry, Reciprocity, and Ethics

Research Strategies

Data Collection Techniques

Managing and Recording Data

Data Analysis Strategies

Management Plan, Timeline, Feasibility

Appendices

Although these two examples are similar, my model emphasizes more introductory topics, such as definitions, delimitations, and limitations, as well as information about the assumptions and specific design used in the study. Regardless of the differences, both models represent a reasonable format for a qualitative design.

SUMMARY

In this chapter I focused on selecting a paradigm for a scholarly study. I addressed focusing a topic by using the techniques of scripting a single sentence that completes the thought, "My study is about . . .," drafting a working title, and addressing whether the focus is researchable. I recommended choosing a **single** paradigm for the study, based on the distinctive characteristics of the qualitative and quantitative paradigm assumptions. These differences are the nature of reality (the ontological assumption), the relationship of the researcher to that being researched (the epistemological assumption), the role of values (the axiological assumption), the use of language and words (the rhetorical assumption), and the overall process of the research study (the methodological assumptions). The rationale for a **single** paradigm is based on such issues as time, skills, and the overall size of the project. I suggested that the rationale for the **paradigm of choice** be based on worldview or assumptions of each paradigm, training and experience, psychological attributes, the nature of the problem, and the audience for the study. Within a paradigm, one needs to specify the method used. Quantitative method types discussed in this book are surveys and experiments; qualitative method types (or designs) are ethnographies, grounded theory studies, case studies, and phenomenology studies. From the paradigm and the method type, one considers the methodology,

the format for the entire study. Examples were provided of formats for designing quantitative and qualitative studies.

WRITING EXERCISES

WRITING EXERCISES

1. Draft a working title for your study. Use the suggestions advanced in this chapter for the design of the title. If preparing a dissertation or a thesis, prepare the title page for the study.
2. Develop a table of contents for the study, based on one of the formats presented in this chapter.