

RESEARCH DESIGN

Qualitative,
Quantitative,
and Mixed Methods
Approaches

SECOND EDITION

John W. Creswell

University of Nebraska, Lincoln



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I dedicate this book to Karen Drumm Creswell. She is the inspiration for my writing and my life. Because of her, as wife, supporter, and detailed and careful editor, I am able to work long hours and keep the home fires burning during the years that I devote to my job and my books. Thank you from the bottom of my heart for being there for me.

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For information:



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E-mail: order@sagepub.com

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Preface

PURPOSE

This book advances a framework, a process, and compositional approaches for designing qualitative, quantitative, and mixed methods research in the human and social sciences. Increased interest in and use of qualitative research, the emergence of mixed methods approaches, and continuing use of the traditional forms of quantitative designs have created a need for this book's unique comparison of the three approaches to inquiry. This comparison begins with preliminary consideration of knowledge claims for all three approaches, a review of the literature, and reflections about the importance of writing and ethics in scholarly inquiry. The book then addresses the key elements of the process of research: writing an introduction; stating a purpose for the study; identifying research questions and hypotheses; using theory; defining, delimiting, and stating the significance of the study; and advancing methods and procedures for data collection and analysis. At each step in this process, the reader is taken through qualitative, quantitative, and mixed methods approaches.

The cover illustration depicts a mandala, a Hindu or Buddhist symbol of the universe. Creation of a mandala, much like creation of a research design, requires looking at the "big picture" as well as tremendous attention to detail—a mandala made of sand can take days to create because of the precise positioning of the pieces, which sometimes are individual grains of sand. The mandala also shows the interrelatedness of the parts of a whole, again reflecting research design, in which each element shapes a complete study.

AUDIENCE

This book was prepared for graduate students and faculty who seek assistance in preparing a plan or proposal for a scholarly journal article, dissertation, or thesis. At a broader level, the book may be useful as both

a reference book and a text for graduate courses. To best take advantage of the design features in this book, the reader needs a basic familiarity with qualitative and quantitative research; however, terms will be explained and recommended strategies advanced for those needing introductory assistance in the design process. This book also is intended for a broad audience in the social and human sciences. Readers' comments to the first edition of this book indicate that individual users came from many disciplines and fields. I hope that researchers in fields such as marketing, management, criminal justice, psychology, sociology, K-12 education, higher and postsecondary education, nursing, health sciences, urban studies, family research, and other areas will find this edition useful.

FORMAT

In each chapter, I share examples drawn from varied disciplines. These examples are drawn from books, journal articles, dissertation proposals, and dissertations. Though my primary specialization is in education, the illustrations are intended to be inclusive of the social and human sciences. They reflect issues in social justice and examples of studies with marginalized individuals in our society, as well as the traditional samples and populations studied by social researchers. Inclusiveness also extends to methodological pluralism in research today, and the discussion incorporates alternative philosophical ideas, diverse modes of inquiry, and numerous procedures.

This book is not a detailed method text; instead, I highlight the essential features of research design. The coverage of research strategies of inquiry is limited to frequently used forms: experiments and surveys in quantitative research; phenomenology, ethnography, grounded theory, case studies, and narrative research in qualitative research; and concurrent, sequential, and transformative designs in mixed methods research. Although students preparing a dissertation proposal should find this book helpful, topics related to the politics of presenting and negotiating a study with graduate committees are addressed thoroughly in other texts.

Consistent with accepted conventions of scholarly writing, I have tried to eliminate any words or examples that convey a sexist or ethnic orientation. Examples were selected to provide a full range of gender and cultural orientations. Favoritism also did not play into my use of

qualitative and quantitative discussions—the reader will find that I sometimes begin with qualitative examples and sometimes with quantitative examples. Readers should note that in the longer examples cited in this book, many references are made to other writings. Only the reference to the work I am using as an illustration will be cited here, not the entire list of references embedded within any particular example.

As with the first edition, I have maintained features to improve the readability and understandability of the material. These features are bullets to emphasize key points, numbered points to stress steps in a process, longer passages with annotations to provide the reader with key research ideas being incorporated into the passages, and emphasized words to help researchers build their vocabulary of quantitative, qualitative, and mixed methods approaches. At the end of each chapter are both writing exercises, with which to practice the principles learned in the chapter, and annotated lists of additional readings, consisting of references to other texts that will provide a more complete understanding of the material covered.

In this second edition of the book, new features have been added in response to developments in research and reader feedback:

- Mixed methods research has been added to quantitative and qualitative approaches. In each chapter, I discuss the process of designing a mixed methods proposal or plan in addition to presenting the other two approaches.
- The writing chapter, found at the end of the book in the first edition, has been moved to the third chapter at the front of the book. Indeed, before writing a proposal, authors need to consider basic writing features.
- Ethics has also been included in a more substantive way. In the third chapter, I devote an entire section to ethical issues that may arise in quantitative, qualitative, and mixed methods designs. Ethical issues should be anticipated appropriately at the start of a project.
- Many new initiatives have occurred in qualitative research since I authored the first edition of this book. The chapter on qualitative procedures, Chapter 10, reflects much new thinking on this topic, including developments in advocacy, participatory, and emancipatory approaches to research that have now become central to most qualitative inquiry.

- Likewise, mixed methods research has expanded and come into its own as an approach to inquiry since I authored the first edition. The chapter in the first edition titled "Combining Qualitative and Quantitative Research" is appropriately called "Mixed Methods and Procedures" in this edition, and I have entirely rewritten this chapter to reflect thinking that has emerged during the last decade.
- In every chapter, I have added updated references within the chapter as well as new references for "additional reading" so that the reader can combine some of the classic reading with new works.
- In discussing research questions and hypotheses, I have provided more examples and clarified instructions for writing different forms. Additional specific illustrations were added for qualitative, quantitative, and mixed methods approaches.

OUTLINE OF CHAPTERS

This book is divided into two parts. Part I consists of steps that researchers need to consider before they develop their proposals or plans for research. Part II discusses the actual steps in composing a proposal and plan. A brief summary of each chapter follows.

Part I: Preliminary Considerations

This part of the book discusses preparing for the process of design. It contains Chapters 1 through 3.

Chapter 1: A Framework for Design

In this chapter, I discuss the importance of having a framework for designing research. This framework involves bringing together claims being made about what constitutes knowledge, a strategy of inquiry, and specific methods. Three approaches result from this interconnection: qualitative, quantitative, and mixed methods. This chapter will help a researcher identify the three approaches and choose which approach to use for a particular study.

Chapter 2: Review of the Literature

Reviewing the literature about a topic is another preliminary step to proposal design. This chapter identifies specific strategies that will be

helpful in searching and reviewing the resources available for designing a study.

Chapter 3: Writing Strategies and Ethical Considerations

Also necessary before beginning the process of proposal design are development of a sense of the overall writing structure and anticipation of ethical considerations that may arise during the research. This chapter provides outlines for quantitative, qualitative, and mixed methods research proposals and considers ethical issues that often arise during studies.

Part II: Designing Research

This part of the book describes the steps in the research process. It contains the remaining chapters of the book, Chapters 4 through 11.

Chapter 4: The Introduction

It is important to properly introduce a research study. This requires identifying the research problem or issue, framing this problem within the existing literature, pointing out deficiencies in the literature, and targeting the study for an audience. This chapter provides a systematic method for designing a scholarly introduction to a proposal or study.

Chapter 5: The Purpose Statement

At the beginning of research proposals, authors mention the central purpose or intent of the study. This passage is the most important statement in the entire proposal. In this chapter, the reader will learn how to write this statement for quantitative, qualitative, and mixed methods studies and will learn a "script" useful in the writing process.

Chapter 6: Research Questions and Hypotheses

The questions and hypotheses addressed by the researcher serve to narrow and focus the purpose of the study. As another major signpost in a project, the set of research questions and hypotheses needs to be written carefully. In this chapter, the reader will learn how to write both qualitative research questions and quantitative research questions and hypotheses, as well as how to employ both forms in writing mixed methods questions and hypotheses. Numerous examples serve to illustrate these processes.

Chapter 7: The Use of Theory

Theories serve different purposes in the three forms of inquiry. In quantitative research, they provide a proposed explanation for the relationship among variables being tested by the investigator. In qualitative research, they may often serve as a lens for the inquiry or are generated during the study. In mixed methods studies, researchers employ them in many ways, including those associated with quantitative and qualitative approaches. This chapter provides an overview of how theory might be used in the three approaches to research and cites specific examples to illustrate these uses.

Chapter 8: Delimitations, Limitations, and Significance

All researchers set certain restrictions or boundaries around what their studies will address. These boundaries define terms used in the study, delimit the scope of the inquiry, limit the practices used, and target the significance of the proposed study for different audiences. This chapter helps a reader design each of these sections for a proposal or plan.

Chapter 9: Quantitative Methods

Quantitative methods involve the processes of collecting, analyzing, interpreting, and writing the results of a study. Specific methods exist in both survey and experimental research that relate to identifying a sample and population, specifying the strategy of inquiry, collecting and analyzing data, presenting the results, making an interpretation, and writing the research in a manner consistent with a survey or experimental study. In this chapter, the reader will learn the specific procedures for designing survey or experimental methods.

Chapter 10: Qualitative Procedures

Qualitative approaches to data collection, analysis, and report writing differ from the traditional, quantitative approaches. Use of purposeful sampling, collection of open-ended data, analysis of text or pictures, representation of information in figures and tables, and personal interpretation of the findings all inform qualitative procedures. This chapter advances steps in designing qualitative procedures, and it illustrates these procedures with examples from phenomenology, grounded theory, ethnography, case studies, and narrative research.

Chapter 11: Mixed Methods Procedures

Mixed methods procedures employ aspects of both quantitative methods and qualitative procedures. In designing these procedures,

researchers need to convey the intent of mixed methods research and its applications in the social and human sciences. Then the procedures involve identifying the type of mixed methods strategy of inquiry, the data collection and analysis approaches, the researcher's role, and the overall structure guiding the proposed study. This chapter will provide the reader with an overview of mixed methods research as practiced today and indicate the steps taken in designing a mixed methods procedure for a proposed study.

Designing a study is a difficult and time-consuming process. This book will not necessarily make the process easier, but it should provide specific skills useful in the process, knowledge about the steps involved in the process, and a practical guide to composing and writing scholarly research. Before the steps of the process unfold, I recommend that proposal developers think through their approach to research, conduct a literature review on their topic, develop an outline of topics to include in a proposal design, and begin anticipating potential ethical issues that may arise in the research. Part I introduces these topics.

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This book could not have been written without the encouragement and ideas of the hundreds of students in the doctoral level "Proposal Development" course that I have taught at the University of Nebraska–Lincoln over the years. Specific former students and editors were instrumental in its development: Dr. Sharon Hudson, Dr. Leon Cantrell, the late Nette Nelson, Dr. De Tonack, Dr. Ray Ostrander, and Diane Greenlee. Since the publication of the first edition of the book, I have also become indebted to the students in my introductory research methods courses and to individuals who have participated in my mixed methods seminars. These courses have been my "laboratories" for working out ideas, incorporating new ones, and sharing my experiences as a writer and researcher. In addition, I am grateful for the insightful suggestions provided by the following reviewers: Susan E. Dutch, Westfield State College; Hollis Glaser, University of Nebraska; Steve Guerriero, Antioch New England School; Gladys Hildreth, University of Kentucky; Nancy Leech, Colorado State University; Martha Montero-Sieburth, University of Massachusetts, Boston; David Morgan, Colorado State University; and Kathleen Young, University of New Mexico.

I also could not have produced this book without the support and encouragement of my friends at Sage Publications. Sage is and has been a first-rate publishing house. I especially owe much to my editor and mentor, C. Deborah Laughton. Throughout a decade of work with Sage, C. Deborah has always provided thoughtful guidance, a great eye for design, and encouragement for me as a writer and researcher.

PART I

Preliminary Considerations

- Chapter 1
A Framework for Design
- Chapter 2
Review of the Literature
- Chapter 3
Writing Strategies and
Ethical Considerations

Part I will address several preliminary considerations that are necessary before designing a proposal or a plan for a study. These considerations pertain to selecting an approach or framework for the overall design (i.e., quantitative, qualitative, or mixed methods), reviewing the literature to understand how a proposed study adds or extends prior research, and employing—at the outset—good writing and ethical practices.

A Framework for Design

In the past two decades, research approaches have multiplied to a point at which investigators or inquirers have many choices. For those designing a proposal or plan, I recommend that a general framework be adopted to provide guidance about all facets of the study, from assessing the general philosophical ideas behind the inquiry to the detailed data collection and analysis procedures. Using an extant framework also allows researchers to lodge their plans in ideas well grounded in the literature and recognized by audiences (e.g., faculty committees) that read and support proposals for research.

What frameworks exist for designing a proposal? Although different types and terms abound in the literature, I will focus on three: quantitative, qualitative, and mixed methods approaches. The first has been available to the social and human scientist for years, the second has emerged primarily during the last three or four decades, and the last is new and still developing in form and substance.

This chapter introduces the reader to the three approaches to research. I suggest that to understand them, the proposal developer needs to consider three framework elements: philosophical assumptions about what constitutes *knowledge claims*; general procedures of research called *strategies of inquiry*; and detailed procedures of data collection, analysis, and writing, called *methods*. Qualitative, quantitative, and mixed methods approaches frame each of these elements differently, and these differences are identified and discussed in this chapter. Then typical scenarios that combine the three elements are advanced, followed by the reasons why one would choose one approach over another in designing a study. This discussion will not be a philosophical treatise on the nature of knowledge, but it will provide a practical grounding in some of the philosophical ideas behind research.

THREE ELEMENTS OF INQUIRY

In the first edition of this book, I used two approaches—qualitative and quantitative. I described each in terms of different philosophical assumptions about the nature of reality, epistemology, values, the rhetoric of research, and methodology (Creswell, 1994). Several developments in the last decade have caused a reexamination of this stance.

- Mixed methods research has come of age. To include only quantitative and qualitative methods falls short of the major approaches being used today in the social and human sciences.
- Other philosophical assumptions beyond those advanced in 1994 have been widely discussed in the literature. Most notably, critical perspectives, advocacy/participatory perspectives, and pragmatic ideas (e.g., see Lincoln & Guba, 2000; Tashakkori & Teddlie, 1998) are being extensively discussed. Although philosophical ideas remain largely “hidden” in research (Slife & Williams, 1995), they still influence the practice of research and need to be identified.
- The situation today is less quantitative *versus* qualitative and more how research practices lie somewhere on a continuum between the two (e.g., Newman & Benz, 1998). The best that can be said is that studies *tend* to be more quantitative or qualitative in nature. Thus, later in the chapter I introduce *typical* scenarios of quantitative, qualitative, and mixed methods research.
- Finally, the practice of research (such as writing a proposal) involves much more than philosophical assumptions. Philosophical ideas must be combined with broad approaches to research (strategies) and implemented with specific procedures (methods). Thus, a framework is needed that combines the elements of philosophical ideas, strategies, and methods into the three approaches to research.

Crotty's (1998) ideas established the groundwork for this framework. He suggested that in designing a research proposal, we consider four questions:

1. What epistemology—theory of knowledge embedded in the theoretical perspective—informs the research (e.g., objectivism, subjectivism, etc.)?
2. What theoretical perspective—philosophical stance—lies behind the methodology in questions (e.g., positivism and postpositivism, interpretivism, critical theory, etc.)?

Elements of Inquiry

Alternative Knowledge Claims

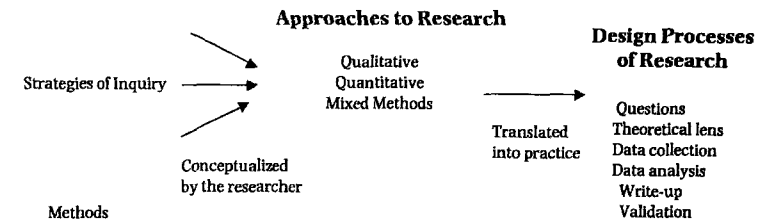


Figure 1.1 Knowledge Claims, Strategies of Inquiry, and Methods Leading to Approaches and the Design Process

3. What methodology—strategy or plan of action that links methods to outcomes—governs our choice and use of methods (e.g., experimental research, survey research, ethnography, etc.)?
4. What methods—techniques and procedures—do we propose to use (e.g., questionnaire, interview, focus group, etc.)?

These four questions show the interrelated *levels* of decisions that go into the process of designing research. Moreover, these are aspects that inform a choice of approach, ranging from the broad assumptions that are brought to a project to the more practical decisions made about how to collect and analyze data.

With these ideas in mind, I conceptualized Crotty's model to address three questions central to the design of research:

1. What knowledge claims are being made by the researcher (including a theoretical perspective)?
2. What strategies of inquiry will inform the procedures?
3. What methods of data collection and analysis will be used?

Next, I drew a picture, as shown in Figure 1.1. This displays how three elements of inquiry (i.e., knowledge claims, strategies, and methods) combine to form different approaches to research. These approaches, in turn, are translated into processes in the design of research. Preliminary steps in designing a research proposal, then, are to assess the knowledge claims brought to the study, to consider the strategy of inquiry that will be used, and to identify specific methods. Using these three elements, a