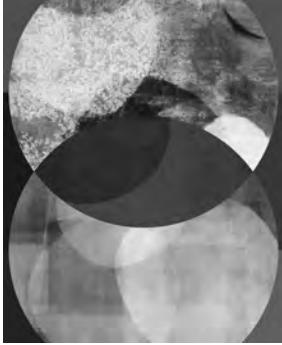


# CHAPTER 1



---

## Introduction: The Demand for and Value of Fully Integrated Qualitative and Quantitative Research

The demand for more rigorous evidence of policy and program effectiveness has been building globally for more than four decades. Expanding access to data and growing expectations and capacity for measuring program performance have coincided with increasing calls by the public for greater accountability for policy and program *outcomes* and responsiveness to stakeholder interests and needs. For example, in the United States the Coalition for Evidence-Based Policy—formed in 2001 by leaders from academic and policymaking circles to promote efforts to build a knowledge base of proven interventions in social policy—argued that programs were too often implemented with little regard for evidence, costing billions of dollars while failing to address critical societal problems and needs. And in the United Kingdom, the Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre) was created in 1993 as a social policy counterpart to the well-known, science-focused Cochrane Collaboration, to likewise promote broader use of systematic approaches to reviewing and using scientific evidence in social policymaking.

Data and methodological advances have been fundamental to, as well as spurred by, the growing demands for evidence-based policymaking. This has, in turn, stimulated ongoing

debates about what constitutes rigorous and reliable evidence and how research evidence should be generated and judged. Entities such as the Cochrane Collaboration, the Campbell Collaboration, and the U.S. Department of Education's What Works Clearinghouse have established formal standards for classifying studies according to their research design and methodology, commonly assigning the highest evidence ratings to randomized controlled trials. In these forums for assessing evidence quality, qualitative research is typically considered only to the extent that it is part of an experimental or quasi-experimental study, if at all. Objections to such a rigid hierarchy for the sifting and weighing of social policy evidence have recently grown louder, however. Heinrich (2007) suggested that information on policy and program impacts is of limited use if it does not enable policymakers to attribute observed impacts to particular components of an intervention and to understand the processes that produced them. Similarly, Cook and Ludwig (2006) expressed concern that an undue focus on identifying statistically significant impacts has led to the exclusion of much policy-relevant evidence that is "concerned with basic beliefs about human nature and interactions" (p. 696).

In this context, mixed methods research (combining qualitative and quantitative methods) has attracted increasing attention as a compelling approach to identifying and explaining policy and program impacts—that is, going beyond "cause and effect" to better understand the "why" and "how" of observed effects, as we discuss in greater detail throughout this book. In this introductory chapter, we first briefly describe the importance and value of a mixed-methods approach to research in the context of the recent push for evidence-based policy, and we accordingly lay the groundwork for the case we make in this book for striving for a more fully or tightly integrated mixed methods research approach in policy and program evaluation research. We then provide readers with an overview of the contents of the book and offer some suggestions for its use in graduate courses and seminars.

## **THE ROLE OF MIXED METHODS RESEARCH IN MEETING THE DEMAND FOR EVIDENCED-BASED POLICY AND PRACTICE**

---

Evidence-based policy is an approach to making informed policy decisions based principally on scientific research evidence, that is, research that achieves a high degree of internal validity as well as generalizability and replicability of its causal inferences. It has long been espoused in the medical field but has progressively extended to investigations across a range of social policy domains, including education, workforce development, poverty reduction, criminal justice,

public health, and more (Sanderson, 2002). Although applied use of this term varies to some extent, it is widely seen as an attempt to move beyond the experience of the policymaker as the exclusive source of knowledge in policy design and to more deliberately, systematically, and judiciously draw on the best evidence to inform program and policy decision making. Alice Rivlin's (1971) work as scholar and practitioner was a harbinger of these efforts. She called for widespread social experimentation to improve the effectiveness of our social programs, while also recognizing that the process of developing new methods to advance this cause would be both iterative and evolving.

By many accounts, the push for evidence-based policymaking has achieved important successes. Gueron and Rolston (2013) count among them the generation and use of higher-quality evidence in policymaking, as well as the creation of "learning communities" that bridge academics and practitioners and greater awareness of the value of a continuous learning process. Gueron, as president of MDRC for nearly two decades and a staunch supporter of randomized social experiments, and Rolston, who spearheaded the use of experimental evaluation techniques during his career in government, also make clear that experimental evidence was "not the only type of evidence (or even the most important) that would matter to policymakers" (p. 426). In fact, an appreciation for mixed methods research is unmistakable in the following articulation of their approach to research (Gueron & Rolston, 2013, p. 426):

We always viewed the random assignment design as the skeleton on which to build an evaluation that used multiple techniques to address a broader range of questions—including those raised by practitioners and managers, and by researchers who used different methods to diagnose the problems and understand why people behave as they do and how social programs work in practice. . . . They [program funders and government partners] cared about why program participants and managers behaved as they did, why programs were or were not successfully implemented, and what could be done to improve the results.

### ***Defining Mixed Methods Research***

Creswell and Plano Clark (2011) describe how our conceptions of mixed methods research have evolved and correspondingly discuss a range of definitions that have been offered in the literature to characterize mixed methods work. The most basic definition is of a study that includes at least one quantitative method and one qualitative method. However, as they explain in their discussion, mixed methods research has progressed to a new "way of thinking

or seeing,” that is, involving philosophical assumptions about how methods should be mixed throughout the research process. These more recent definitions are more prescriptive about the purpose, scope, and process of mixing qualitative and quantitative methods. We similarly argue in this book for a fuller, more tightly integrated approach to mixing methods throughout all phases of the research process (from research design to research dissemination), with the goal to increase the rigor, relevance, and influence of policy evaluation and research findings. Our own and others’ research experiences suggest that the data and findings generated from a more fully integrated mixed method approach provide the kinds of rich information and insights that are essential to supporting evidence-based policy and practice.

Recognizing that the mixed methods research community is a sprawling “family,” varying widely in terms of foci, strategy, and process, we spend time in Chapter 2 describing some of the frameworks or design typologies commonly associated with mixed methods research. The intent of this review is not to be comprehensive, which would be beyond the scope of this chapter given the expansiveness of this literature. We describe how we build on important strands of this work and the specific design strategies that we employ in striving toward fuller integration of qualitative and quantitative methods. We also elaborate in Chapter 2 on our own conceptualization of a more fully integrated mixed methods research approach and its application toward strengthening evidence for policy and program decision making. We describe our approach as

a research process by which researchers interact regularly and intensively—with each other and their research partners—to draw on and combine the strengths of qualitative and quantitative methods, from the starting point of defining research objectives to the ending point of achieving those goals. In the context of applied policy and evaluation studies, research goals are defined in terms of the organizations’ or policymakers’ improvement goals or desired ends, and the research design is directly linked to organizational, policy, or program goals and may evolve with the policy or program landscape. The full integration of qualitative and quantitative methods contributes to both the understanding of processes for achieving outcomes or goals and, through the application of best practices in research within methodologies, the achievement of those ends.

In effect, we are describing here the end point toward which we strive in our own mixed methods research. In Chapter 2 and throughout the various chapters of this book, we will demonstrate our application of this approach and the key elements, strategies, and activities on which it turns. But we first briefly consider here the question of how researchers can gauge their progress toward

the goal of a fully integrated mixed method approach. Below, we offer four basic benchmarks, which we describe in greater detail in Chapter 2 and then illustrate with practical applications and case studies throughout this book. We argue that fully integrated mixed methods research is more likely to be achieved when the follow things happen:

- Integration or mixing of methods follows through the entire cycle of the research process, from planning to inquiry, to data collection and analysis, to dissemination and redesign.
- Qualitative and quantitative methods are conducted from the start and simultaneously in ways that are interactive and iterative, in the sense that every step of the process proceeds dynamically from interaction of the two, with instrumentation and interpretation, for example, growing out of that interaction.
- Qualitative and quantitative methods are employed so as to leverage the strengths of each and provide a wider and richer range of ways to understand complex phenomena around a variety of problems and outcomes.
- The mixing of qualitative and quantitative methods is designed in ways that involve diverse stakeholders in articulating the research questions and theory of change, identifying process and outcome measures, and interpreting and disseminating the research evidence with the goal of supporting policy and program improvements.

### **WHAT DISTINGUISHES THIS BOOK IN THE MIXED METHODS LITERATURE**

---

This book is not a traditional “textbook treatment” of mixed methods research. It assumes that readers have basic knowledge of what types of research methods are typically classified as quantitative versus qualitative and an understanding of the principles of causal inference, as well as the importance of situational and structural context in qualitative work. For example, as reflected in the previous discussion, the randomized controlled experiment is widely considered to be the strongest method for causal identification, yet social experiments rarely achieve the kind of controlled conditions a laboratory allows and inevitably rest on important assumptions about statistical equivalence of the treatment and control groups that require verification.

In addition, the existing mixed methods literature provides a thorough exposition of the various approaches to and classifications of mixed methods designs. Important works by Tashakkori and Teddlie (1998, 2003, 2009),

Creswell (1999), Creswell and coauthors (2003, 2011), Greene (2007), and Greene and coauthors (1989, 1997) individually and collectively offer a menu of mixed methods design options, differentiated by their attention to purpose, priority, timing, and the “how-to” and level of mixing of methods at various stages of research. Although we further discuss this prior work to a limited extent in Chapter 2, it is not our intent to provide a full appraisal of the mixed methods literature or to suggest that our own approach supplants any of these works. Rather, we view our work as building on that of these scholars, while intensifying the focus on policy and program evaluation and further probing areas of qualitative and quantitative integration that receive less attention in existing works. Here, we briefly summarize how we see our book as distinct from important works in the current mixed methods literature.

1. *Strengthening policy and program design and evaluation research:* We argue for greater use of mixed methods research to inform policy and program design and bridge the gap between the production of research evidence and the capacity of policymakers to translate findings into program and policy improvements. Mixed methods research in the disciplines typically concentrates on the use of methods to build theory and general knowledge about a given problem. Discussions are more likely to focus primarily on conceptual frameworks driving the research and arguments for its validity in the academic research community. In research that involves policy and program evaluation, research objectives are broadened to include developing evidence and insights that will serve as a key source of practical knowledge for policymakers and practitioners working in a given area. In a tightly integrated mixed methods approach to policy and program evaluation, the quality of information generated derives not only from the application of scientific methods but also from how well the data represent both specific (e.g., local) manifestations and observations of the general problem. It also requires a grounding *in* the data that captures the complexity of social phenomena and real-world policy and organizational problems.
2. *Striving for full integration and explicating the “know-how” of a fully integrated mixed methods approach:* The basic logic or “step-by-step” process for undertaking both quantitative and qualitative research is more similar than many researchers probably realize, which allows for tighter integration across the various phases or steps of the research process. These steps include defining a research problem or question,

developing a theory of change, designing instrumentation, collecting data, analyzing data and interpreting the findings, and reporting and disseminating the research results. Intensifying integration across this sequence of steps can be a very powerful strategy for ultimately increasing the validity and reliability of the results. As described in Chapters 2 and 3 and illustrated throughout the case study chapters, moving toward fully integrated mixed methods research involves developing and using knowledge in one phase of integration to inform another, that is, building feedback loops not only between qualitative and quantitative but also across the research phases to support hypothesis induction, deduction, and verification. The examples presented in this book emphasize the need for simultaneous work and coordination of that work across all aspects of the research process and offer practical insights on the “how-to” of this approach.

3. *Creating mechanisms for collaboration and coordination that also support a dynamic approach to research:* Policy and program evaluation rarely take place with a “textbook” stable intervention or within an unchanging environment that would allow for more definitive conclusions about a policy or program’s effectiveness. If researchers are to generate findings that inform our understanding of a policy or program’s implementation and impacts—for example, the efficacy of tax credits and tuition vouchers in increasing low-income students’ participation in charter schools—then the research approach needs to have the capacity to adapt to and manage the often considerable uncertainty in the environment and intervention being studied. We argue that a more fully integrated mixed methods research approach is better able to accommodate these dynamics and incorporate them into the research design and implementation in ways that enhance what is learned from the research, particularly when the program or policy stakeholders are engaged in the research process. For example, what *is* the intervention in an environment in which a local government’s capacity to administer or regulate the policy is declining and where there is a high turnover rate in key staff? Existing discussions of mixed methods research approaches tend to overlook not only the importance of collaboration between qualitative and quantitative researchers but also the valuable role for exchange and collaboration with policymakers and program implementers, which we show in this book both confirms and strengthens the validity of research findings.

## OVERVIEW OF REMAINING CHAPTERS

---

Chapters 2 through 4 are intended to motivate the importance of tightly integrated, mixed methods research approaches, offer tools and guidance in integrating qualitative and quantitative methods, and help students evaluate the appropriateness of mixed methods work in the context of policy questions and program objectives. We offer a framework to support efforts to more fully integrate mixed methods approaches across the life cycle of the mixed methods research process in policy settings. Based on this framework, key objectives of mixed methods research include to increase knowledge and understanding of interventions (in theory and as implemented) and mechanisms/pathways to program impacts; explore policy issues in greater depth and detail, adding contextualization; inform construction of empirical measures, choice of methods, and specification of models; and aid and enhance interpretation and dissemination of qualitative and quantitative research findings.

### ***Chapter 2. Conceptualizing Mixed Methods Research***

Chapter 2 builds a conceptual argument for striving toward a fully integrated mixed methods approach in applied policy research and evaluation. We begin by mapping the increasing use of mixed methods approaches across different areas of social policy. We describe commonly accepted conditions necessitating or calling for mixed methods work. To support this work, scholars have developed multiple and sometimes overlapping categorization schemes for describing the design components that characterize a mixed methods study, as well as the attributes that distinguish different kinds of mixed method studies. While leveraging this work, we argue that policy and context changes (as discussed earlier) call for a more fully integrated mixed methods approach. We offer a “mini case” of what the components of such an approach look like in practice.

### ***Chapter 3. Designing and Implementing Fully Integrated Mixed Methods Research***

In Chapter 3, we extend our discussion of the implementation of integrated mixed methods work. This chapter offers step-by-step guidance in integrating qualitative and quantitative methods along key areas of integration—including

research design, instrumentation design and data collection, data analysis and interpretation, and dissemination of findings—in applied research projects. It aims to fill a knowledge gap concerning the types of capacity-building that are needed to conduct this work and offers examples of the mechanics and logistics of integrating qualitative and quantitative methods in these areas. Readers should also acquire in this chapter an appreciation for thoroughly assessing the appropriateness of mixed methods research and developing a carefully conceptualized design that facilitates fully integrated qualitative and quantitative research.

#### ***Chapter 4. Practical Tools for Integrated Mixed Method Studies of Policy Implementation***

This chapter offers program evaluators concrete tools for striving toward a more fully integrated mixed methods research approach that strengthens the validity, conceptual density, relevance, and applicability of research findings and increases stakeholder confidence in results. We argue that project administration and the structures and processes used to support the execution of the research (including how researchers structure collaboration with stakeholders, coordinate joint analyses, and build knowledge of a problem) are as important to research as the methods themselves. We also demonstrate how using these tools to provide formative as well as summative feedback and to identify mechanisms within a system that can be used to support continuous program improvement can ultimately improve policy or program outcomes.

#### ***Chapters 5, 6, 7. Applications of Mixed Methods***

We argue that to be instructional, the rendering of the process of mixed methods work needs to be more granular and transparent than we have seen in much published work. Using comprehensive examples of social science research conducted by the authors, these chapters present the details of research efforts that strove toward a more tightly integrated, mixed methods approach. The case examples explore both the benefits and challenges of conducting this type of research in investigations and evaluations of policy and program impacts. The applications examine the value of this approach for policy studies conducted at the national policy level across multiple sites, including state and local policy evaluations, as well as those undertaken in international contexts, which often present unique cultural and political challenges to the research.

They also describe the authors' own experiences in which they grew in their learning about mixed methods work over time through the *practice* of these methods in actual program and policy settings.

Chapter 5 presents work from two different cases in which Patricia Burch was a co-principal investigator and describes how Dr. Burch and her collaborators strove toward a fully integrated, mixed methods approach, working at two different schooling levels (K-12 and higher education). Some of the tools, techniques, and processes that were developed in the K-12 (class size reduction) project were used as models and adapted for our integrated mixed methods study of supplemental educational services. The research project described in Chapter 6, in which Carolyn Heinrich was a co-principal investigator, is distinct in that the research team applied mixed methods in both the design and implementation of the program intervention itself, as well as in an impact evaluation of the program. This chapter describes how in the course of an 8-year study, the fully integrated mixed methods strategy was key to making contributions to the program's development as well as to a rich understanding of its effects. In Chapter 7, we feature an international study (conducted by a multinational team) in which Carolyn Heinrich was a co-principal investigator and where a carefully planned, well-coordinated effort overcame logistical, geographical, and cultural barriers to maintain a fairly tightly integrated mixed methods design throughout the research process. It is our goal to impart both knowledge and "know-how" through these cases so that researchers in the early stages of learning to apply mixed methods can benefit from these experiences.

We offer these cases as representations of mixed methods work that has striven toward full integration, rather than exemplars. In any research endeavor, analysts bring different experiences and lenses to the work. Their experiences (technical experiences as well as know-how) shape the approach and analysis. Rather than ignoring or downplaying that experience, we follow the social scientist maxim, "Mine your experience, there is potential gold there!" (Strauss, 2003, p.11). By offering comprehensive and detailed examinations of our own processes of mixed methods work, we hope to bring into fuller view the rich complexity and potential of more fully integrated mixed methods research.

We also recognize that the mixed methods projects we describe in these chapters were undertaken with teams of researchers—both large and small—and that not all of the tools and strategies discussed in the cases will be applicable to the individual researcher. Individual researchers with training in both qualitative and quantitative methods, however, could still apply the framework that we set forth in striving toward integration throughout the various stages of research in smaller scale projects, to the extent that resources allow.

## **Chapter 8. The Future of Fully Integrated Mixed Methods Research**

This book treats integrated mixed method studies as an active and changing practice that is ultimately aimed at fostering improvement in public policies and programs and their outcomes. Although our work is broadly applicable, it has particular relevance for the current and next generation of interventions aimed at improving social, educational, and economic outcomes for low socio-economic and disadvantaged groups in the United States and in other parts of the world. The final chapter situates the application of tightly integrated, mixed methods in the dynamic economic and political context of increasing privatization and third-party governance, the shrinking role of the state, and heightened investments in social and educational policies in developing countries. We consider both the challenges and advantages of a mixed methods approach in light of these developments and conclude with a synthesis of the benefits of generating more rigorous and relevant policy research, including researcher credibility, stakeholder confidence, and effective use of research resources and dissemination of research findings.

### **RECOMMENDATIONS FOR HOW TO USE THIS BOOK**

---

Presently, most upper-level undergraduate and graduate-level research methods course sequences offer separate courses for qualitative methods and quantitative methods. However, increasingly, researchers and those preparing for research and academic careers will need to understand and/or use both qualitative and quantitative methods (Hesse-Biber & Johnson, 2013). As instructors of research methods classes, we find it essential to supplement the quantitative or qualitative components of our courses with materials that illustrate the value and uses of mixed methods. We envision this book as being adopted in a variety of methods courses—including qualitative and quantitative methods and program evaluation courses, seminar courses, as well as potentially being used as a core textbook for mixed methods classes—to offer students and researchers a cutting-edge perspective on the value of and models for (or the “how-to” of) tightly integrating these two types of research methods in social and educational sciences and other policy research. Our book offers examples of practical applications of a tightly integrated, qualitative-quantitative methods approach and paves the way for future advances in the integration of these methods in applied research with detailed discussion of the mechanics of effectively mixing

these methods. The examples traverse state and local, federal and international contexts and several different social science, education, and policy domains to appeal to a broad audience of students, academics, and researchers.

In addition, the case studies are presented in such a way to allow the reader to delve into the world of integrated mixed methods research and to see the challenges involved and strategies pursued. Although each setting is unique, the challenges and strategies described cut across the chapters rather than being unique to a particular study or setting. For example, in Chapters 5, 6, and 7, the reader/student will be encouraged to think about how the framework (or theory of change) introduced was shaped by the particular policy context and program objectives, and whether and how the findings from the study offered the reader new ideas for more efficient and effective use of research resources. Instructors can use the case studies to ground discussions of the strategies and challenges of mixed methods work and help students develop skills in reasoning and problem solving in striving for fully integrated, mixed methods design and implementation.

Finally, Chapters 2 through 7 conclude with a set of discussion questions and “how to apply this further” suggestions aimed at generating dialogue around the students’ own content-based reflections and deliberation of the particular cases and interventions explored. These questions and applications should also appeal to readers’ broader methodological interests and considerations about how and when to undertake mixed methods research. For active researchers, we aim to encourage immediate applications of some of the strategies we describe for more fully integrating mixed methods in research.