METHODS IN EDUCATIONAL RESEARCH

From Theory to Practice

Marguerite G. Lodico, Dean T. Spaulding,
Katherine H. Voegtle

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PREFACE

Methods in Educational Research: From Theory to Practice is pedagogically based: written from the fundamental perspective of how one learns in general and, more specifically, how one learns through research. In this book, we have tried to apply the techniques and instructional practices underlying "good teaching" to teaching people about educational research. Furthermore, we have paid attention to the metacognitive processes associated with *how* one *learns* about research and *how* one develops and becomes a more active participant in the educational research community.

Today's political climate of No Child Left Behind, "scientifically based" research, and school accountability has certainly changed the face of education as well as the knowledge and research skills needed by educators in the 21st century. In addition to building these competencies, this book hopes to empower teachers to take an active role in conducting research in their classrooms, districts, and the greater educational community—activities that are now not only expected but required of all teachers.

Therefore, the purpose of this book is to assist students, primarily graduate students, in the area of education or related fields (administration, school psychology, or school counseling) in developing competencies and skills in educational research. More specifically, the purpose of this book is to provide an understanding of such competencies that is both broad and deep. Breadth of understanding is established in the student who demonstrates general knowledge as to

the characteristics and properties of all the quantitative, qualitative, and mixed-methods research approaches. In doing so, the student should be able to identify and distinguish between the various types of research approaches: their underlying philosophies, purposes, and methods. Depth of understanding is established through the student determining a need for a particular type of research approach and developing a research proposal around that idea, including a review of literature that supports the study and a proposed methods section that complements the research problem.

We pilot-tested the chapters in our own classes and, after many revisions, arrived at a final ordering and integration of concepts that seemed optimal for both our teaching and our students' learning. In educational research courses, it is always challenging to cover the information needed by students "in time" for them to use the information in their research and writing for their proposal. The increasing complexity of research approaches and data analysis in educational research today makes teaching this course for master's-level students an especially difficult task. Some of the practical tools in this book, such as the article summary sheets in Chapter Two, have been designed to make this process less confusing and intimidating for our students.

The book includes a number of special features designed to assist the teaching and learning processes:

- Research vignettes illustrating research that is tied to practice and used to make decisions about educational practices open each chapter on specific research approaches and are discussed throughout the chapters.
- The book focuses on both conceptual understanding and practical aspects of conducting research.
- Research issues and concepts relevant to the accountability movement and data-driven decision making are discussed throughout the book.
- Developmental processes involved in researching and writing a research proposal are emphasized.
- Research proposals using both qualitative and quantitative approaches are included along with annotations on the key criteria for evaluating a proposal.
- Key concepts students should know are highlighted in each chapter.

Suggested readings are provided at the end of each chapter to extend the discussion of general issues raised in the chapter and provide citations for sample studies that illustrate the type of research discussed.

- Discussion questions are provided to stimulate thinking about the issues raised in the chapter or encourage students to apply the concepts presented.

ACKNOWLEDGMENTS

Any textbook on educational research owes a debt to numerous people who have built the rich and varied literature in this field. In some sense, this book grew out of the conversations and relationships we have had with colleagues over many years, especially at meetings of the American Educational Research Association and the American Evaluation Association. Although we cannot name all of these persons, we certainly could not have begun to think about this book without the stimulation of many people in these vibrant educational communities.

However, many people closer to home also made this book possible. The College of Saint Rose and especially our former dean, Crystal Gips, provided substantial support for our work by granting us course reductions, providing funding for conference presentations and support services, and making available to us capable graduate assistants. The idea for the book began with a survey of all members at our college who taught research courses, and our colleagues generously provided ideas and input into what was needed. We are especially indebted to Steve Black, one of our college librarians, who has a background in education and teaches courses in educational research for our department. Steve shared with us his innovative ideas on strategies for searching the literature and using library resources effectively. Many of his ideas are reflected in Chapter Two of this book. Members of our department consistently encouraged us in our writing, and our present and past department chairs, Richard Brody and Ismael Ramos, always managed to get people to cover courses as needed each semester. Our colleagues

who are practicing educational researchers, James Allen, Aviva Bower, Donna Burns, Ron Dugan, and Heta-Maria Miller, each contributed his or her own special expertise and pedagogical ideas to the book. In addition, Kathy's partner, Jim Fahey, a professor at a nearby university, helped us to "get our philosophy right." Jim created the organizing tables on the philosophical frameworks, and his precise prose is responsible for the crystal clarity of the section on philosophical frameworks in Chapter One.

Elizabeth Gerron, a former student and graduate assistant of ours, returned to work for us as an editor of early versions of the book. Her keen eye for detail and passion for clear and well-organized writing considerably strengthened the early chapters of this book. Kathy and Marguerite's graduate assistant, Jessica Gillis, spent hours online and in the library locating resources that would be helpful and interesting for students. Dean's graduate assistant, Jian (Ken) Geo, provided invaluable assistance in finding resources, checking references, and formatting the book. He always got us what we needed, even at times when we were hysterically trying to meet impossible schedules. We are also certainly grateful to the staff at Jossey-Bass, including Andy Pasternack, Catherine Craddock, Seth Schwartz, and Susan Geraghty for the opportunity to make this dream come true. Input by Catherine and Susan greatly improved the book.

We also thank the students from our educational research classes who patiently read through often-imperfect drafts of the book, providing feedback and suggestions. Many of them allowed us to include samples of their work in this book to help us fulfill our goal of making courses on educational research more comprehensible, relevant, and useful to future generations of preservice educators.

Writing a book also results in a great deal of clutter and requires quite a bit of physical space. We would like to thank our colleagues who share our office pod for their patience and good humor in putting up with our frequent group meetings in the pod's common space. As they have told us, they will be glad to see the book completed.

Finally, on a personal level, we thank our partners, Jim Fahey, Phil Lodico, and Chip McCarthy, who kept us sane, well fed, and entertained throughout the often-hectic job of creating this book.

M.G.L., D.T.S., and K.H.V.

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METHODS IN EDUCATIONAL RESEARCH

CHAPTER ONE

INTRODUCTION TO EDUCATIONAL RESEARCH

Chapter Objectives

After reading this chapter, you should be able to

1. Describe the role of research in the educational accountability movement
2. Describe key aspects of the No Child Left Behind (NCLB) Act, including
   the role of educational research in implementation of the act and
   the potential effects of NCLB on the future of educational research
3. Explain the differences between inductive and deductive reasoning
4. Articulate the key differences between knowledge-oriented philosophical frameworks for educational research (scientific realism and social constructivism) and action-oriented approaches (advocacy or liberatory and pragmatism) and *begin* to define your own framework
5. Explain the differences between and provide a simple example of
   - quantitative and qualitative methods of data collection and
   - basic and applied educational research
6. For each research approach discussed,
   - describe the key elements of that approach and
   - provide an example of a research study using that approach

Educational Research Today

At the beginning of the 21st century, the educational research community is again responding to the call for increased accountability in our nation's schools. This call for accountability comes from both within and outside the educational community. Educators, parents, students, communities, and politicians are hopeful that the new accountability will result in increased achievement for America's students. As discussed in Box 1.1, the No Child Left Behind (NCLB) legislation holds schools accountable for monitoring and reporting student progress based on test scores. Monies for schools are being made available for programs that are "scientific and reliable," although the federal government's definition of scientific research is very narrow (see Neuman, 2002).

Meeting NCLB requirements makes knowledge of educational research an essential component of professional preparation for all educators. However, to promote creative, innovative, yet sound solutions to current educational problems, future educators must become knowledgeable about a multitude of research approaches that reach beyond those techniques defined as "reliable" under the NCLB legislation. It is our hope that this book will enable students to participate in ongoing debates about the status and future of education on both national and local levels. We also hope that you will develop skills and knowledge to take part in a much longer and broader tradition: using scientific research to identify and develop effective educational practices.

Box 1.1 No Child Left Behind Act

Although the current movement for accountability began at the end of the 20th century, the No Child Left Behind (NCLB) legislation passed by the U.S. Congress in 2001 has brought accountability to a new level. NCLB is the reauthorization of the Elementary and Secondary Education Act, passed in 1965, which resulted in large federal expenditures to help improve education for children from disadvantaged communities. According to the U.S. Department of Education (2005b), since 1965 the federal government has spent over $300 billion to educate youth from low-income families. However, the government also reported that only 32 percent of fourth-graders could read at grade level and most of those who could not read were ethnic minorities. Believing that the money spent was not improving education, the Bush administration passed the NCLB legislation as a mechanism to increase accountability of individual schools and states and ultimately reform education.

What this legislation effectively does is to significantly increase the role of the federal government in education and set into place regulations that reach into virtually