

HOW TO DESIGN AND EVALUATE RESEARCH IN EDUCATION



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Second Edition

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TO MARGE, FOR ALL HER SUPPORT

PREFACE

How to Design and Evaluate Research in Education is directed to students taking their first course in educational research. Because this field continues to grow so rapidly with regard to both the knowledge it contains and the methodologies it employs, the authors of any introductory text are forced to carefully define their goals as a first step in deciding what to include in their book. In our case, we continually kept three main goals in mind. We wanted to produce a text that would:

1. Provide students with the basic information needed to understand the research process, from idea formulation through data analysis and interpretation
2. Enable students to use this knowledge to design their own research investigation on a topic of personal interest
3. Permit students to read and understand the literature of educational research

The first two goals are intended to satisfy

the needs of those students who must plan and carry out a research project as part of their course requirements. The third goal is aimed at students whose course requirements include learning how to read and understand the research of others. Many instructors, ourselves included, build all three goals into their courses, since each one seems to reinforce the others. It is hard to read and fully comprehend the research of others if you have not yourself gone through the process of designing and evaluating a research project. Similarly, the more you read and evaluate the research of others, the better equipped you will be to design your own meaningful and creative research. In order to achieve the above goals, we have developed a book with the following characteristics.

CONTENT COVERAGE

Goal one, to provide students with the basic information needed to understand the research process, has resulted in a five-part book plan. Part

One (Chapter One) introduces students to the nature of educational research, briefly overviews each of the six methodologies discussed later in the text, and presents an overview of the research process.

Part Two (Chapters Two to Twelve) discusses the basic concepts and procedures that must be understood before one can engage in research intelligently. This includes an understanding of variables, definitions, ethics, sampling, instrumentation, validity, reliability, and data collection and analysis. These and other concepts are covered thoroughly, clearly, and relatively simply. The emphasis throughout is to show students, by means of clear and appropriate examples, how to set up a research study in an educational setting on a question of interest and importance.

Part Three (Chapters Thirteen to Eighteen) describes and illustrates the methodologies most commonly used in educational research. Many key concepts presented in Part Two are considered again in these chapters in order to illustrate their application to each methodology. Finally, each methodology chapter concludes with a carefully chosen study from the published research literature. Each study is analyzed by the authors with regard to both its strengths and weaknesses. Students are shown how to read and critically analyze a study they might find in the literature.

Part Four (Chapter Nineteen) shows how to prepare a research proposal/report (involving a methodology of choice) that builds on the concepts and examples developed and illustrated in the previous chapters.

Part Five (Chapter Twenty) concludes the book with examples of how research can be done by practitioners.

RESEARCH EXERCISES

In order to achieve our second goal of helping students learn to apply their knowledge of basic processes and methodologies, we organized the chapters in the same order that students normally follow in developing a research proposal or conducting a research project. Then we concluded each chapter with a research exercise that

includes a fill-in problem sheet. These exercises allow students to apply their understanding of the major concepts of each chapter. When completed, these accumulated problem sheets will have led students through the step-by-step processes involved in designing their own research projects. Although this step-by-step development requires some revision of their work as they learn more about the research process, the gain in understanding that results as they slowly see their proposal develop “before their eyes” justifies the extra time and effort involved.

ACTUAL RESEARCH STUDIES

Our third goal, to enable students to read and understand the literature of educational research, has led us to conclude each of the Part Three methodology chapters with an annotated study that illustrates a particular research method. At the end of each study we analyze its strengths and weaknesses and offer suggestions as to how it might be improved. Similarly, we include a student research proposal that we have critiqued with marginal comments. This annotated proposal has proved an effective means of helping students understand both good and questionable research practices.

STYLE OF PRESENTATION

Because students are typically anxious regarding the content of research courses, we have taken extraordinary care not to overwhelm them with dry, abstract discussions. More than any text to date, our presentations are laced with clarifying examples and with summarizing charts, tables, and diagrams. Our experience in teaching research courses for more than 20 years has convinced us that there is no such thing as having “too many” examples in a basic text.

In addition to the many examples and illustrations that are embedded in our (we hope) informal writing style, we have built the following pedagogical features into the book: (1) lists of chapter-opening learning objectives, (2) end-of-chapter summaries and discussion questions, and (3) an extensive end-of-book glossary.

FEATURES IN THE SECOND EDITION

In this edition we have revised and updated all chapters. New examples and illustrations of important concepts have been added throughout. Several issues that have been raised by critical researchers have been included and illustrated in Chapter One.

The discussion of ethics and research in Chapter Two has been expanded into a separate chapter (Chapter Three), and a new chapter on research by practitioners has been added (Chapter Twenty). The chapter on the application of statistical procedures has been simplified by removing the computational examples and placing them in the appendix.

New pedagogical features include a completed set of problem sheets in Appendix E, and the addition of annotations to each of the six illustrative studies presented in Chapters Thirteen through Eighteen. Finally, a more detailed index and an expanded glossary are included.

These changes reflect feedback from both instructors and students whose response to the first edition has been very gratifying. We appreciate and thank them for their suggestions.

ACKNOWLEDGMENTS

Directly and indirectly, many people have contributed to the preparation of this book. We

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Finally, we would like to thank our wives for their unflagging support during the highs and lows that inevitably accompany the preparation of a text of this magnitude.

*Jack R. Fraenkel
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