

教育·心理影印版系列教材

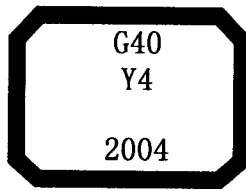
教育研究方法导论

影印版

Research Methods in Education An Introduction (Eighth Edition)

William Wiersma, Stephen G. Jurs

 中国轻工业出版社



教育·心理影印版系列教材

教育研究方法导论

(影印版)

Research Methods in Education
An Introduction (Eighth Edition)

William Wiersma, Stephen G. Jurs

 中国轻工业出版社

内 容 简 介

本书是一部综合介绍设计、实施教育研究的经典著作，被美国高校广泛采用，作为引导学生从事教育研究的专业教材。它系统地介绍了教育研究的性质和特点，并根据不同的教育研究类型，分别详细讨论了教育研究的设计和实施。

本书自出版以来不断再版，根据教育研究的发展适时进行修改。其内容涵盖面非常广泛，既包括定量研究和质性研究，也深入介绍了数据统计分析的方法和SPSS等统计软件的应用知识。正如专家所言：“本书是一本极好的教材，它是学生和教育者的理想资源，它帮助我们深入地理解教育研究的方法、研究设计、实施步骤以及写作。”

PURPOSE

The extent and type of research required in graduate programs in education vary in the United States and in countries worldwide. However, in practically all such programs, there are some research requirements, including participation in research activities, for the successful completion of the program. Therefore, a knowledge of research methods, or at least of basic concepts of research methods, is not only useful, but essential. Much of the professional education literature addresses research results. Educators should be familiar with the research results in their specialty areas.

AUDIENCE

Research Methods in Education: An Introduction is written primarily for graduate students in education because the graduate level is usually the point in education at which the student first encounters formal training in research methods. However, because it is an introductory book, it is appropriate at any point at which research methods are introduced in a program. Students in undergraduate programs that emphasize research should find the book useful, even if there is no formal course in research methods. Education draws on several disciplines for its research methods, and for that reason students in related disciplines will find application for the book, especially students in the behavioral sciences. Of course, the book can be used independently as a professional reference.

APPROACH

The text emphasizes the rationale for commonly used research procedures and the application of these procedures. Research methods are illustrated through numerous examples, some taken from actual research studies. Exercises are provided at the ends of the chapters to enhance learning. The most commonly used, specific types of research are addressed, both quantitative and qualitative. In attempting to provide comprehensive coverage, topics such as reviewing the literature and preparing a research report are discussed. The procedures covered have wide applicability and the ideas presented are general enough to apply in many specific situations.

ORGANIZATION

The early chapters of the text follow approximately the sequence in which a research study is conducted. The introductory chapter describes the nature of educational research and introduces the steps in the research process. Because adequate identification of a research

problem is so important, the entire second chapter is devoted to this topic. This chapter also introduces basic research terminology. Chapter 3 describes how to review the literature, including the identification of information sources. In this chapter an example of a computer search is presented, along with other information about using electronic sources. Chapter 4 discusses research design for quantitative research; then Chapters 5, 6, and 7 are devoted to different types of quantitative research—experimental, quasi-experimental, and nonexperimental quantitative research. Chapter 8 deals with research design for qualitative research. Chapter 9 discusses historical research and Chapter 10 ethnographic research. Both of these types of qualitative research have been around a long time, and certainly ethnographic research in education has received increased attention over the past two or three decades.

Chapter 11 is a new chapter that addresses three research methods that do not fit neatly into qualitative or quantitative research but are finding increased use in education. These are mixed methods, modeling methods, and the Delphi method. With this organization, the eight somewhat middle chapters focus on unique characteristics of specific types of research. Readers using the book independently can concentrate on the chapters that fit their particular types of research. These chapters represent the types of research most commonly used in education.

Because many studies involve samples, Chapter 12 is devoted to sampling designs. Chapter 13 provides an overview of several approaches to measuring variables and also discusses the preparation of data sets for computer analysis. When quantitative research methods are used, sooner or later data typically are analyzed using statistics. Chapters 14 and 15 describe commonly used statistical procedures; one chapter is devoted to descriptive statistics, the other to inferential statistics. It should be emphasized, however, that this is not a statistics text. The emphasis of the two statistics chapters is on the underlying reasoning of the statistical procedures and the conditions under which they apply. There is no intention of developing computational mastery, although there are computational illustrations including computer solutions.

At various points in the research process, it is necessary to communicate about research. Much of this is done through written proposals and reports, and some it is done through oral communications. Chapter 16 provides suggestions about how to prepare a research proposal and a research report. The discussion deals not only with the content of proposals and reports but also provides suggestions for how to put a report together in a correct and efficient manner. Guidelines are given in Chapter 16 for presenting research at conferences, and for graduate students when they are the center of attention for the defense of a dissertation (thesis) proposal or the dissertation (thesis) itself in a committee meeting.

Anyone involved in educational research finds it necessary to read research reports, many found in professional periodicals. With the large quantity of research reports comes variation in the quality of the reports and research they describe. Chapter 17 discusses evaluating research reports, and there is a section describing how research proposals are evaluated.

There are three appendices. The first addresses “Ethical and Legal Considerations in Conducting Research.” There are many discussions of these issues in the education literature, with considerable repetition. Indeed, entire books address these issues. Appendix 1

contains an overview that should be sufficient for most educational researchers. However, there are references to more extensive discussions should a reader desire more information on these issues. The second appendix contains answers to selected, end-of-chapter exercises. The final appendix contains five statistical tables for handy reference. A glossary of research methods terms follows Appendix 3.

The content of the text is not entirely linear; that is, all chapters are not necessarily dependent on the preceding chapters. The first two chapters cover introductory and basic concepts. However, if students in a course already are proficient in reviewing the literature, Chapter 3 may be omitted. Also, the chapters that describe specific types of research are quite independent. For example, it would not be necessary to complete Chapters 5 and 6 before considering Chapter 7, the nonexperimental quantitative research chapter. Most texts contain more content than typically is covered in a quarter or semester, so instructors have some options to fit their course emphases.

THE EIGHTH EDITION

Any new edition of a text contains the usual updating of examples, references, and so forth. A title change was made in Chapter 7 from that in the seventh edition, from “Survey Research” to “Nonexperimental Quantitative Research.” Most researchers think of survey research as the use of questionnaires and interviews and surveys such as assessments of educational achievement. Because this chapter includes ex post facto research and research that sometimes goes by the name causal-comparative, a more general title was given to the chapter. As mentioned earlier, a chapter on mixed, modeling, and Delphi methods was added and is now Chapter 11. The basic organization remains the same as for the seventh edition, and any users of that edition should feel comfortable with the eighth edition.

The availability of computers, especially personal computers (PCs) greatly facilitates activities such as reviewing the literature and computing statistical analyses. Of course, there are many software programs available and it is not the intent of this text to review such programs. However, the use of electronic means in reviewing the literature has been expanded. There are computer solutions run with SPSS software in the statistics chapters. A data disk or file containing data sets for the statistical analysis accompanies the text. (Disk instruction sheets are located at the back of the book.) These data sets can be adapted to the reader’s software.

The text contains over one hundred figures, tables, and examples. Diagrams of research designs are used to illustrate their structures and underlying concepts. Examples, taken from a wide variety of educational research types and settings, are used throughout. Many examples are taken from the research literature. Important concepts are summarized and set off throughout the book, and key concepts are listed at the end of each chapter, so the pedagogical features of this eighth edition should serve the user well. We offer Research Navigator for the first time to assist students in understanding the research process and in using resources on the Web. Students can access the EBSCO research database called ContentSelect to get additional information about research terms. Several of the exercises at the end of chapters incorporate Research Navigator.

ACKNOWLEDGMENTS

Special acknowledgment goes to Dr. Merrill Mehan of the Appalachia Educational Laboratory, to Dr. Arlen Gullickson of the Evaluation Center, Western Michigan University, for permission to reproduce a cover letter and example items from the external evaluation report, and to Ms. Cyndi Boyd of the Houston Independent School District for permission to reproduce part of the Teacher Observation Form. We appreciate the permission of Dr. Edward Nussel and Dr. Philip Rusche to reproduce material from a research project.

We are grateful to the Literary Executor of the late Sir Ronald A. Fisher, F. R. S.; to Dr. Frank Yates, F. R. S.; and to Longman Group Ltd., London, for permission to reprint Tables III, IV, and VII (abridged) from their book *Statistical Tables for Biological, Agricultural, and Medical Research* (6th edition, 1974).

The many insightful comments of the following reviewers were helpful in the edition: Bonnie Anderson, University of Houston; Roxana Della Vecchia, Towson University; Leping Liu, University of Nevada; Susan Carol Losh, Florida State University; and Larry Monk, Northwestern State University.

William Wiersma
Stephen G. Jurs

目 录

- 第1章 教育研究：性质和特点 /1
- 第2章 明确研究问题 /28
- 第3章 浏览文献 /52
- 第4章 定量研究设计 /83
- 第5章 实验研究 /99
- 第6章 准实验研究 /130
- 第7章 非实验型的定量研究：
适用范围 /155
- 第8章 质性研究设计 /201
- 第9章 历史研究 /223
- 第10章 人种志研究 /242
- 第11章 混合方法、建模方法和
特尔斐法 /274
- 第12章 样本设计 /295
- 第13章 测量和数据收集 /322
- 第14章 数据分析：描述统计 /351
- 第15章 数据分析：推断统计 /372
- 第16章 交流研究成果 /408
- 第17章 评估研究报告 /437
- 附录1 实施研究的伦理和法律问题 /450
- 附录2 练习题答案 /454
- 附录3 数据表 /475
- 研究方法术语表 /487
- 人名索引 /493
- 主题索引 /495
- 光盘使用说明 /503

CONTENTS

Preface **xiii**

Acknowledgments **xvi**

CHAPTER ONE

Educational Research: Its Nature and Characteristics	1
THE NATURE OF EDUCATIONAL RESEARCH	2
The Systematic Process of Research	3
The Validity of Educational Research	5
The Reliability of Educational Research	9
Research Has a Variety of Forms	10
CLASSIFICATION OF EDUCATIONAL RESEARCH	10
Basic and Applied Research	10
Qualitative and Quantitative Research	13
General Methods of Research	15
THE ROLE OF THEORY	18
THE ACTIVITIES OF THE RESEARCH PROCESS	21
Identification of the Research Problem	22
Data Collection	22
Analysis	23
Summarizing Results and Drawing Conclusions	23
SUMMARY	24
KEY CONCEPTS	25
EXERCISES	25
NOTES	26
REFERENCES	26

CHAPTER TWO

Identification of a Research Problem	28
SELECTION OF A RESEARCH PROBLEM	28

STATEMENT OF THE RESEARCH PROBLEM	30
Constants, Variables, and Operational Definition	33
Hypotheses and the Statement of the Problem	39
Types and Forms of Hypotheses	40
SUMMARY	48
KEY CONCEPTS	50
EXERCISES	50
NOTES	51
REFERENCE	51

CHAPTER THREE

The Review of the Literature 52

THE ACTIVITIES OF THE REVIEW OF THE LITERATURE	53
SOURCES OF INFORMATION	55
The Library	55
Periodical Literature	55
Education Index	56
Educational Resources Information Center (ERIC)	56
An Example Using <i>CJJE</i> and <i>RIE</i>	58
Other Indexes and Abstracts	62
Review of Educational Research (RER)	62
Reports of Meta-Analysis	63
Abstracts and Reports in Periodicals	64
Theses and Dissertations	64
Books	65
COMPUTER SEARCHES OF DATABASES	66
Conducting a Search	67
Searching a Database for a Specific Research Problem: One Descriptor	68
Searching a Database for a Specific Research Problem: More than One Descriptor	70
Other Sources Available through the Computer	71
SELECTING STUDIES FOR THE REVIEW OF THE LITERATURE	72
ASSEMBLING AND SUMMARIZING INFORMATION	73
Abstract or Summary	74
Organizing Information	75
INTERPRETING AND USING INFORMATION	76
Critical Review	76

Writing the Review	77
Referencing	78
Preparing the Bibliography	79
SUMMARY	80
KEY CONCEPTS	80
EXERCISES	81
NOTES	82
REFERENCES	82

CHAPTER FOUR

Research Design in Quantitative Research	83
THE PURPOSES OF RESEARCH DESIGN	83
THE CONCEPT OF CONTROLLING VARIANCE	84
Procedures for Controlling Variance	85
CHARACTERISTICS OF GOOD RESEARCH DESIGN	93
Freedom from Bias	93
Freedom from Confounding	94
Control of Extraneous Variables	94
Statistical Precision for Testing Hypotheses	94
SUMMARY	95
KEY CONCEPTS	95
EXERCISES	96
NOTES	97
REFERENCES	98

CHAPTER FIVE

Experimental Research	99
THE MEANING OF EXPERIMENTAL DESIGN	99
Experimental Variables	101
Use of the Term <i>Subject</i>	102
CRITERIA FOR A WELL-DESIGNED EXPERIMENT	102
Experimental Validity	103
Threats to Experimental Validity	105
POSTTEST-ONLY CONTROL GROUP DESIGN	109

PRETEST-POSTTEST CONTROL GROUP DESIGN	111
SOLOMON FOUR-GROUP DESIGN	113
FACTORIAL DESIGNS	115
REPEATED MEASURES DESIGNS	118
Time Series Designs	120
INTERPRETING RESULTS OF EXPERIMENTS	121
RANDOMNESS AND REPRESENTATIVENESS	124
SUMMARY	125
KEY CONCEPTS	126
EXERCISES	126
NOTES	129
REFERENCES	129

CHAPTER SIX

Quasi-Experimental Research	130
THE PROBLEMS OF VALIDITY	130
POSTTEST-ONLY, NONEQUIVALENT CONTROL GROUP DESIGN	131
PRETEST-POSTTEST, NONEQUIVALENT CONTROL GROUP DESIGN	134
TIME SERIES DESIGNS	136
Single-Group Time Series Design	137
Multiple-Group Time Series Design	140
Variations in Time Series Designs	142
SINGLE-SUBJECT DESIGNS	142
A-B Design	143
A-B-A Design	146
ACTION RESEARCH AND QUASI-EXPERIMENTAL RESEARCH	148
SUMMARY	150
KEY CONCEPTS	151
EXERCISES	151
NOTES	154
REFERENCES	154

CHAPTER SEVEN**Nonexperimental Quantitative Research 155****NONEXPERIMENTAL QUANTITATIVE RESEARCH: ITS SCOPE
AND DESCRIPTION 155**

Ex post facto Research 156

Survey Research 159

SURVEY DESIGNS 159

Longitudinal Designs 160

Cross-Sectional Designs 162

THE METHODOLOGY OF SURVEY RESEARCH 163**QUESTIONNAIRE SURVEYS 165**

Item Construction 165

Item Format 169

The Cover Letter 172

Questionnaire Format 174

Procedures for Increasing Response Rate 175

Identifying Sources of Nonresponse 178

Incomplete and Possibly Dishonest Responses 180

Examples 182

WEB-BASED SURVEYS 182

Factors to Consider when Conducting Web-Based Surveys 186

INTERVIEW SURVEYS 186

Interview Items 187

Conducting the Interview 188

Potential Sources of Error 190

Telephone Interviews 191

A Comment about Branching Items 192

OTHER SURVEYS 192**ANALYZING AND REPORTING SURVEY RESULTS 193**

Hypothetical Example 194

SUMMARY 194**KEY CONCEPTS 196****EXERCISES 196****NOTES 198****REFERENCES 199**

CHAPTER EIGHT

Research Design in Qualitative Research	201
THE EPISTEMOLOGY OF QUALITATIVE RESEARCH	201
COMPONENTS OF RESEARCH DESIGN	203
Working Design	203
Working Hypotheses	204
Data Collection	204
Data Analysis and Interpretation	205
TYPES OF DESIGNS IN QUALITATIVE RESEARCH	210
PERSPECTIVES FOR QUALITATIVE RESEARCH	211
Example: Funnel Approach	213
Example: Modified Analytic Induction Approach	214
RELIABILITY AND VALIDITY OF QUALITATIVE RESEARCH	215
USE OF TECHNOLOGY IN QUALITATIVE RESEARCH	216
Capabilities of Computer Software in Qualitative Research	217
SUMMARY	219
KEY CONCEPTS	220
EXERCISES	220
NOTES	221
REFERENCES	221

CHAPTER NINE

Historical Research	223
THE VALUE OF HISTORICAL RESEARCH	224
SOURCES OF INFORMATION IN HISTORICAL RESEARCH	226
THE METHODOLOGY OF HISTORICAL RESEARCH	226
Identification of the Research Problem	227
Collection and Evaluation of Source Materials	230
Synthesis of Information	232
Analysis, Interpretation, and Formulating Conclusions	233
QUANTITATIVE METHODS IN HISTORICAL RESEARCH	235
COMMENTS ON THE REPORTING OF HISTORICAL RESEARCH	235
Reports in Professional Journals	236
SUMMARY	238

KEY CONCEPTS	239
EXERCISES	239
REFERENCES	240

CHAPTER TEN

Ethnographic Research	242
THE NATURE OF ETHNOGRAPHY IN EDUCATION	242
The Phenomenological Nature	243
The Naturalistic Nature	244
The Holistic and General Perspective	245
A CONCEPTUAL SCHEMA FOR ETHNOGRAPHIC RESEARCH	245
THE PROCESS OF ETHNOGRAPHIC RESEARCH	248
Identification of the Phenomenon to Be Studied	249
Identification of Subjects	251
Hypothesis Generation	252
Data Collection	252
Analysis	258
Drawing Conclusions	261
EXAMPLE OF ETHNOGRAPHIC RESEARCH IN EDUCATION	262
THE RELIABILITY AND VALIDITY OF ETHNOGRAPHIC RESEARCH	264
Reliability	264
Validity	265
THE ROLE OF ETHNOGRAPHIC RESEARCH	268
SUMMARY	269
KEY CONCEPTS	270
EXERCISES	271
NOTES	272
REFERENCES	272

CHAPTER ELEVEN

Mixed, Modeling, and Delphi Methods	274
MIXED METHODS	274
Summary	277
MODELING METHODS	277
Application of Modeling Methods	278

Summary	280
DELPHI METHOD	281
The Delphi Process	282
Variations of the Delphi	286
Examples of the Delphi	287
Considerations When Conducting a Delphi	290
SUMMARY	291
KEY CONCEPTS	291
EXERCISES	291
NOTES	293
REFERENCES	293

CHAPTER TWELVE

Sampling Designs 295

THE CONCEPT OF A RANDOM SAMPLE	295
Random Selection and Random Assignment	296
Use of a Random Number Table	297
Use of the Computer in Sample Selection	299
Sampling Error and Sampling Bias	300
CRITERIA FOR A SAMPLING DESIGN	301
STRATIFIED RANDOM SAMPLING	302
Allocation of Sample Size among Strata	303
CLUSTER SAMPLING	305
SYSTEMATIC SAMPLING	306
Possible Problem of Periodicity	307
CONSIDERATIONS IN DETERMINING SAMPLE SIZE—RANDOM SAMPLING	308
PURPOSEFUL SAMPLING	311
Comprehensive Sampling	312
Maximum Variation Sampling	312
Extreme Case Sampling	313
Typical Case Sampling	313
Homogeneous Sampling	314
Other Variations of Purposeful Sampling	314
Sample Size of Purposeful Samples	315
SUMMARY	317
KEY CONCEPTS	319
EXERCISES	319

NOTES	321
REFERENCES	321

CHAPTER THIRTEEN

Measurement and Data Collection	322
CONCEPTS OF MEASUREMENT	322
Types of Measurement Scales	323
Reliability of Measurement	324
Empirical Procedures for Estimating Reliability	325
Expected Reliability Coefficients for Various Types of Tests	326
Validity of Measurement	326
THE VARIABLES MEASURED IN EDUCATIONAL RESEARCH	330
TESTS AND INVENTORIES USED FOR MEASUREMENT	330
Achievement Tests in Academic and Skills Areas	331
Attitude Inventories	332
Aptitude Tests	337
Rating Scales	338
Observation Systems	339
WHERE TO FIND TEST INFORMATION	340
SCORING AND DATA PREPARATION	344
Coding Data	344
An Example of a Data File	345
SUMMARY	346
KEY CONCEPTS	348
EXERCISES	348
NOTES	349
REFERENCES	349

CHAPTER FOURTEEN

Data Analysis: Descriptive Statistics	351
THE MULTIPLE MEANINGS OF STATISTICS	351
DISTRIBUTIONS	352
Describing a Distribution of Scores	353
Standard Scores	356
CORRELATION: A MEASURE OF RELATIONSHIP	359