2ND EDITION

DESIGNING AND CONDUCTING MIXED METHODS RESEARCH

JOHN W. CRESWELL

University of Nebraska-Lincoln

VICKI L PLANO CLARK

University of Nebraska-Lincoln

mHOCHSCHULELIECHTENSTEINBibliothek

DETAILED CONTENTS

Preface	xix
Purpose of the Book	xix
Audience for the Book	XX
Book Features	XX
New Features Added to the Second Edition	xxi
Acknowledgments	XXV
About the Authors	xvii
Chapter 1. The Nature of Mixed Methods Research	1
Defining Mixed Methods Research	2
Examples of Mixed Methods Studies	6
What Research Problems Fit Mixed Methods?	7
A Need Exists Because One Data Source May Be Insufficient	8
A Need Exists to Explain Initial Results	9
A Need Exists to Generalize Exploratory Findings	9
A Need Exists to Enhance a Study With a Second Method	10
A Need Exists to Best Employ a Theoretical Stance	10
A Need Exists to Understand a Research Objective	
Through Multiple Research Phases	11
What Are the Advantages of Using Mixed Methods?	12
What Are the Challenges in Using Mixed Methods?	13
The Question of Skills	13
The Question of Time and Resources	14
The Question of Convincing Others	15
Summary	16
Activities	17
Additional Resources to Examine	18
Chapter 2. The Foundations of Mixed Methods Research	19
Historical Foundations	20
When Did Mixed Methods Begin?	20
Why Mixed Methods Emerged	21

The Development of the Name	22
Stages in the Evolution of Mixed Methods	22
Formative period 2	5
Paradigm debate period	25
Procedural development period	26
Advocacy and expansion period	27
Reflective period	30
Philosophical Foundations	38
Philosophy and Worldviews	38
Worldviews Applied to Mixed Methods	43
One "best" worldview for mixed methods	43
Multiple worldviews in mixed methods	45
Worldviews relate to the type of mixed methods design	45
Worldviews depend on the scholarly community	46
Theoretical Foundations	47
Summary	50
Activities	51
Additional Resources to Examine	52
Chapter 3. Choosing a Mixed Methods Design	53
Principles for Designing a Mixed Methods Study	54
Recognize That Mixed Methods Designs Can Be Fixed	
and/or Emergent	54
Identify an Approach to Design	55
Match the Design to the Research Problem, Purpose,	
and Questions .	60
Be Explicit About the Reasons for Mixing Methods	61
Key Decisions in Choosing a Mixed Methods Design	63
Determine the Level of Interaction Between	
Determine the Level of Interaction Between the Quantitative and Qualitative Strands	64
	64
the Quantitative and Qualitative Strands	64 65
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative	
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands	
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative	65
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative and Qualitative Strands	65
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative and Qualitative Strands Determine Where and How to Mix the Quantitative	65 65
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative and Qualitative Strands Determine Where and How to Mix the Quantitative and Qualitative Strands	65 65 66
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative and Qualitative Strands Determine Where and How to Mix the Quantitative and Qualitative Strands The Major Mixed Methods Designs	65 65 66 68
the Quantitative and Qualitative Strands Determine the Priority of the Quantitative and Qualitative Strands Determine the Timing of the Quantitative and Qualitative Strands Determine Where and How to Mix the Quantitative and Qualitative Strands The Major Mixed Methods Designs Prototypes of the Major Designs	65 65 66 68 69

Philosophical assumptions behind the convergent design	78
The convergent design procedures	78
Strengths of the convergent design	78
Challenges in using the convergent design	80
Convergent design variants	80
The Explanatory Sequential Design	81
The purpose of the explanatory design	82
When to choose the explanatory design	82
Philosophical assumptions behind the explanatory design	82
The explanatory design procedures	83
Strengths of the explanatory design	83
Challenges in using the explanatory design	85
Explanatory design variants	85
The Exploratory Sequential Design	86
The purpose of the exploratory design	86
When to choose the exploratory design	87
Philosophical assumptions behind the exploratory design	87
The exploratory design procedures	87
Strengths of the exploratory design	89
Challenges in using the exploratory design	89
Exploratory design variants	90
The Embedded Design	90
The purpose of the embedded design	91
When to choose the embedded design	91
Philosophical assumptions behind the embedded design	92
The embedded design procedures	92
Strengths of the embedded design	94
Challenges in using the embedded design	94
Embedded design variants	95
The Transformative Design	96
The purpose of the transformative design	96
When to choose the transformative design	97
Philosophical assumptions behind	
the transformative design	97
The transformative design procedures	97
Strengths of the transformative design	99
Challenges in using the transformative design	99
Transformative design variants	99
The Multiphase Design	100
The purpose of the multiphase design	100
When to choose the multiphase design	100

Philosophical assumptions behind the multiphase design	101
The multiphase design procedures	101
Strengths of the multiphase design	101
Challenges in using the multiphase design	103
Multiphase design variants	103
A Model for Describing a Design in a Written Report	104
Summary	105
Activities	105
Additional Resources to Examine	106
Chapter 4. Examples of Mixed Methods Designs	107
Learning From Examples of Mixed Methods Research	108
Using Tools to Describe Mixed Methods Designs	108
A Notation System	108
Procedural Diagrams	110
Examining the Design Features of Mixed Methods Studies	112
Six Examples of Mixed Methods Designs	115
Study A: An Example of the Convergent Parallel Design	
(Wittink, Barg, & Gallo, 2006)	116
Study B: An Example of the Explanatory	
Sequential Design (Ivankova & Stick, 2007)	119
Study C: An Example of the Exploratory	
Sequential Design (Myers & Oetzel, 2003)	122
Study D: An Example of the Embedded Design	
(Brady & O'Regan, 2009)	123
Study E: An Example of the Transformative Design	
(Hodgkin, 2008)	127
Study F: An Example of the Multiphase Design	
(Nastasi et al, 2007)	130
Similarities and Differences Among the Sample Studies	133
Summary	141
Activities	142
Additional Resources to Examine	142
Chapter 5. Introducing a Mixed Methods Study	143
Writing a Mixed Methods Title	144
Qualitative and Quantitative Titles	144
Mixed Methods Titles	145
Stating the Research Problem in the Introduction	148
Topics in a Statement of the Problem Section	149
Integrate Mixed Methods Into the Statement of the Problem	150

Developing the Purpose Statement	151
Qualitative and Quantitative Purpose Statements	151
Mixed Methods Purpose Statements	153
Writing Research Questions and Hypotheses	160
Qualitative Questions and Quantitative	
Questions and Hypotheses	160
Mixed Methods Research Questions	161
Summary •	168
Activities	169
Additional Resources to Examine	169
Chapter 6. Collecting Data in Mixed Methods Research	171
Procedures in Collecting Qualitative and Quantitative Data	172
Using Sampling Procedures	172
Gaining Permissions .	175
Collecting Information	176
Recording the Data	178
Administering the Procedures	178
Data Collection in Mixed Methods	179
Convergent Design	180
Decide whether the two samples will include	
different or the same individuals	180
Decide whether the size of the two samples will be	
the same or different	183
Decide to design parallel data collection questions	184
Decide if the data will be collected on two, independent	
sources or a single source	185
Explanatory Design	185
Decide whether to use the same or different	
individuals in both samples	185
Decide on the sizes for the two samples	186
Decide what quantitative results to follow up	186
Decide how to select the best participants	
for the qualitative follow-up phase	186
Decide how to describe the emerging follow-up phase	
for institutional review board approval	187
Exploratory Design	187
Decide who and how many individuals to include in	
the sample for the quantitative phase	187
Decide how to describe the emerging follow-up phase	
for institutional review board approval	188

Decide what aspects of the qualitative results	
to use to inform the quantitative data collection	188
Decide what steps to take in developing a good	
quantitative instrument	188
Decide how to convey the instrument development	
component in a procedural diagram	190
Embedded Design	190
Decide the reason and timing for embedding	
a second type of data within a larger design	190
Decide whether the issue of introducing bias within	
an embedded experiment is a concern	193
Decide what approach will provide the design	
or procedure for collecting quantitative	
and qualitative data	193
Decide what data collection issues can be anticipated	
within the chosen design or procedure	194
Transformative Design	194
Decide how best to refer to and interact with participants	195
Decide what sampling strategies	
will promote inclusiveness	195
Decide how to actively involve participants	
in the data collection process	195
Decide to use instruments that are sensitive	
to the cultural context of the group being studied	195
Decide how the data collection process and outcomes	
will benefit the community being studied	196
Multiphase Design	196
Decide to use multiple sampling strategies	197
Decide how to sample and collect data for each phase	197
Decide how to handle measurement and attrition issues	197
Decide on the programmatic thrust to provide	
the framework for the multiphase projects	198
Summary	198
Activities	199
Additional Resources to Examine	200
Chapter 7. Analyzing and Interpreting Data	
in Mixed Methods Research	203
The Basics of Quantitative and Qualitative Data Analysis	
and Interpretation	204
Preparing the Data for Analysis	204

Exploring the Data	206
Analyzing the Data	207
Representing the Data Analysis	208
Interpreting the Results	209
Validating the Data and Results	210
Data Analysis and Interpretation Within Mixed Methods Designs	212
Steps and Key Decisions in Data Analysis for	
Each Mixed Methods Design	214
Decisions for Merged Data Analysis in a Concurrent Approach	222
Strategies for comparing results	223
Strategies for interpreting merged results	
and reconciling differences	232
Decisions for Connected Data Analysis in a Sequential Approach	233
Strategies for connected data analysis	234
Strategies for interpreting connected results	237
Validation and Mixed Methods Designs	238
Software Applications and Mixed Methods Data Analysis	243
Summary .	248
Activities	248
Additional Resources to Examine	249
Chapter 8. Writing and Evaluating Mixed Methods Research	251
Chapter 8. Writing and Evaluating Mixed Methods Research General Guidelines for Writing	251 252
_	
General Guidelines for Writing	252
General Guidelines for Writing Relate the Structure to the Mixed Methods Design	252
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods	252 253
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis	252 253 254
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis	252 253 254 257
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study	252 253 254 257 259
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria	252 253 254 257 259 263 266 266
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria	252 253 254 257 259 263 266 266 267
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary	252 253 254 257 259 263 266 266 267 270
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary Activities	252 253 254 257 259 263 266 266 267 270 271
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary	252 253 254 257 259 263 266 266 267 270
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary Activities	252 253 254 257 259 263 266 266 267 270 271
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary Activities Additional Resources to Examine	252 253 254 257 259 263 266 266 267 270 271 272
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary Activities Additional Resources to Examine Chapter 9. Summary and Recommendations	252 253 254 257 259 263 266 267 270 271 272 273
General Guidelines for Writing Relate the Structure to the Mixed Methods Design Structure of a Proposal for a Mixed Methods Dissertation or Thesis Structure of a Mixed Methods Dissertation or Thesis Structure for a National Institutes of Health Proposal Structure of a Mixed Methods Journal Article Evaluating a Mixed Methods Study Quantitative and Qualitative Evaluation Criteria Mixed Methods Evaluation Criteria Summary Activities Additional Resources to Examine Chapter 9. Summary and Recommendations On Writing a Methodological Paper	252 253 254 257 259 263 266 267 270 271 272 273

On Designing Procedures	280
On the Value Added by Mixed Methods	282
Summary	283
Activities	284
Additional Resources to Examine •	285
Appendix A: An Example of the Convergent Parallel Design (Wlttink, Barg, & Gallo, 2006)	287
Appendix B: An Example of the Explanatory	
Sequential Design (Ivankova & Stick, 2007)	301
Appendix C: An Example of the Exploratory Sequential Design (Myers & Oetzel, 2003)	335
Appendix D: An Example of the Embedded Design (Brady & O'Regan, 2009)	355
Appendix E: An Example of the Transformative Design	251
(Hodgkin, 2008)	371
Appendix F: An Example of the Multiphase Design	
(Nastasi et al., 2007)	391
Glossary	409
References	419
Author Index	433
Subject Index	443