

Contents

Editorial	xxi
Contributors to chapter 2	xxii
Foreword	xxv
Introduction	244
List of boxes	xiii
Acknowledgements	xvii
Introduction	1
Part I The context of educational research	
1 The nature of inquiry – Setting the field	
Introduction	5
The search for truth	5
Two conceptions of social reality	7
Positivism	9
The assumptions and nature of science	11
The tools of science	14
The scientific method	15
Criticisms of positivism and the scientific method	17
Alternatives to positivistic social science: naturalistic approaches	19
A question of terminology: the normative and interpretive paradigms	21
Phenomenology, ethnomethodology and symbolic interactionism	22
Criticisms of the naturalistic and interpretive approaches	25
Critical theory and critical educational research	26
Criticisms of approaches from critical theory	29
Critical theory and curriculum research	30
A summary of the three paradigms	32
The emerging paradigm of complexity theory	33
Feminist research	34
Introduction	41
Research, politics and policy-making	46
Methods and methodology	47
Part 2 Planning educational research	
2 The ethics of educational and social research	
Introduction	51
Informed consent	52
Access and acceptance	55
The field of ethics	58
Sources of tension	58
Voices of experience	61
Ethical dilemmas	62
Ethics and research methods in education	69
Ethics and evaluative research	70
Research and regulation: ethical codes and review	71
Sponsored research	74
Responsibilities to the research community	75
Conclusion	75
3 Planning educational research	
Introduction	78
A framework for planning research	78
A planning matrix for research	87

Managing the planning of research	93	Part 3 Styles of educational research
A worked example	95	
Conclusion	98	
4 Sampling		
Introduction	100	Elements of naturalistic inquiry Planning naturalistic research Critical ethnography Some problems with ethnographic and naturalistic approaches
The sample size	101	
Sampling error	106	
The representativeness of the sample	108	
The access to the sample	109	
The sampling strategy to be used	110	
Probability samples	110	
Non-probability samples	113	
Planning a sampling strategy	117	
Conclusion	117	
5 Sensitive educational research		
What is sensitive research?	119	Introduction Choice of subject Data collection Evaluation Writing the research report The use of quantitative methods Life histories Documentary research
Sampling and access	121	
Ethical issues in sensitive research	124	
Researching powerful people	127	
Asking questions	130	
Conclusion	131	
6 Validity and reliability		
Defining validity	133	Introduction Some preliminary considerations Planning a survey Survey sampling Longitudinal, cross-sectional and trend studies Strengths and weaknesses of longitudinal, cohort and cross-sectional studies Postal, interview and telephone surveys Event history analysis
Triangulation	141	
Ensuring validity	144	
Reliability in quantitative research	146	
Reliability in qualitative research	148	
Validity and reliability in interviews	150	
Validity and reliability in experiments	155	
Validity and reliability in questionnaires	157	
Validity and reliability in observations	158	
Validity and reliability in tests	159	
Validity and reliability in life histories	164	
7 Naturalistic and ethnographic research		
8 Historical and documentary research		
9 Surveys, longitudinal, cross-sectional and trend studies		
10 Internet-based research and computer usage		

Searching for research materials on the Internet	242
Evaluating web sites	244
Computer simulations	245
Geographical Information Systems	251
11 Case studies	
What is a case study?	253
Examples of kinds of case study	258
Why participant observation?	260
Recording observations	260
Planning a case study	261
Writing up a case study	262
Conclusion	263
12 Ex post facto research	
Introduction	264
Co-relational and criterion groups designs	265
Characteristics of <i>ex post facto</i> research	266
Occasions when appropriate	268
Advantages and disadvantages of <i>ex post facto</i> research	268
Designing an <i>ex post facto</i> investigation	269
Procedures in <i>ex post facto</i> research	270
13 Experiments, quasi-experiments, single-case research and meta-analysis	
Introduction	272
Designs in educational experimentation	274
True experimental designs	275
A quasi-experimental design: the non-equivalent control group design	282
Single-case research: ABAB design	284
Procedures in conducting experimental research	285
Examples from educational research	287
Evidence-based educational research and meta-analysis	289
14 Action research	
Introduction	297
Defining action research	297
Principles and characteristics of action research	299
Action research as critical praxis	302
Procedures for action research	304
Reflexivity in action research	310
Some practical and theoretical matters	311
Conclusion	312
Part 4 Strategies for data collection and researching	
15 Questionnaires	
Introduction	317
Ethical issues	317
Approaching the planning of a questionnaire	318
Types of questionnaire items	321
Asking sensitive questions	333
Avoiding pitfalls in question writing	334
Sequencing the questions	336
Questionnaires containing few verbal items	337
The layout of the questionnaire	338
Covering letters or sheets and follow-up letters	339
Piloting the questionnaire	341
Practical considerations in questionnaire design	342
Administering questionnaires	344
Processing questionnaire data	346
16 Interviews	
Introduction	349
Conceptions of the interview	349
Purposes of the interview	351
Types of interview	352

Planning interview-based research procedures	356	Parametric and non-parametric tests	414
Group interviewing	373	Norm-referenced, criterion-referenced and domain-referenced tests	415
Interviewing children	374	Commercially produced tests and researcher-produced tests	416
Focus groups	376	Constructing a test	418
The non-directive interview and the focused interview	377	Devising a pretest and post-test	432
Telephone interviewing	379	Reliability and validity of tests	432
Ethical issues in interviewing	382	Ethical issues in preparing for tests	432
		Computerized adaptive testing	433
17 Accounts			
Introduction	384	20 Personal constructs	
The ethogenic approach	384	Introduction	435
Characteristics of accounts and episodes	384	Characteristics of the method	435
Procedures in eliciting, analysing and authenticating accounts: an example	385	'Elicited' versus 'provided' constructs	436
Network analyses of qualitative data	388	Allotting elements to constructs	437
What makes a good network?	388	Laddering and pyramid constructions	439
Discourse analysis	389	Grid administration and analysis	439
Analysing social episodes	391	Procedures in grid administration	439
Account gathering in educational research: an example	391	Procedures in grid analysis	439
Problems in gathering and analysing accounts	392	Strengths of repertory grid technique	442
Strengths of the ethogenic approach	393	Difficulties in the use of repertory grid technique	442
A note on stories	394	Some examples of the use of repertory grid in educational research	443
		Grid technique and audio/video lesson recording	445
		Focused grids, non-verbal grids, exchange grids and sociogrids	446
18 Observation			
Introduction	396	21 Role-playing	
Structured observation	398	Introduction	448
Critical incidents	404	Role-playing versus deception: the argument	450
Naturalistic and participant observation	404	Role-playing versus deception: the evidence	451
Natural and artificial settings for observation	408	Role-playing in educational settings	452
Ethical considerations	408	The uses of role-playing	452
Some cautionary comments	410	Strengths and weaknesses of role-playing and other simulation exercises	455
Conclusion	412	Role-playing in an educational setting: an example	455
		Evaluating role-playing and other simulation exercises	456
19 Tests			
Introduction	414		
What are we testing?	414		

Part 5

Data analysis

22 Approaches to qualitative data analysis

Introduction	461
Tabulating data	463
Five ways of organizing and presenting data analysis	467
Systematic approaches to data analysis	469
Methodological tools for analysing qualitative data	473

23 Content analysis and grounded theory

Introduction	475
What is content analysis?	475
How does content analysis work?	476
A worked example of content analysis	483
Computer usage in content analysis	487
Reliability in content analysis	490
Grounded theory	491
Interpretation in qualitative data analysis: multilayered texts	495

24 Quantitative data analysis

Introduction	501
Scales of data	502
Parametric and non-parametric data	503
Descriptive and inferential statistics	503
One-tailed and two-tailed tests	504
Dependent and independent variables	504

Reliability	506
Exploratory data analysis: frequencies, percentages and cross-tabulations	506
Statistical significance	515
Hypothesis testing	519
Effect size	520
The chi-square test	525
Degrees of freedom	527
Measuring association	528
Regression analysis	536
Measures of difference between groups and means	542

25 Multidimensional measurement and factor analysis

Introduction	559
Elementary linkage analysis: an example	559
Factor analysis	560
Factor analysis: an example	570
Examples of studies using multidimensional scaling and cluster analysis	576
Multidimensional data: some words on notation	579
Multilevel modelling	583
Cluster analysis	584

26 Choosing a statistical test

How many samples?	586
Assumptions of tests	591
Notes	593
<i>Bibliography</i>	599
Index	633