

Contents

<i>List of figures</i>	xiv		
<i>List of tables</i>	xvi		
<i>List of boxes</i>	xix		
<i>List of contributors</i>	xxi		
<i>Preface to the eighth edition</i>	xxii		
<i>Acknowledgements</i>	xxv		
PART 1			
The context of educational research	1		
1 The nature of enquiry: setting the field	3		
1.1 Introduction	3		
1.2 The search for understanding	3		
1.3 Conceptions of social reality	5		
1.4 Paradigms	8		
1.5 Positivism	10		
1.6 The assumptions and nature of science	10		
1.7 The tools of science	12		
1.8 The scientific method	13		
1.9 Criticisms of positivism and the scientific method	14		
1.10 Post-positivism	16		
1.11 Alternatives to positivistic and post-positivist social science: naturalistic and interpretive approaches	17		
1.12 A question of terminology: the normative and interpretive paradigms	19		
1.13 Phenomenology, ethnomethodology, symbolic interactionism and constructionism	20		
1.14 Criticisms of the naturalistic and interpretive approaches	23		
1.15 Postmodernism and post-structuralist perspectives	24		
1.16 Subjectivity and objectivity in educational research	25		
1.17 The paradigm of complexity theory	27		
1.18 Conclusion	29		
2 Mixed methods research	31		
2.1 Introduction	31		
2.2 What is mixed methods research?	32		
2.3 Why use mixed methods research?	33		
2.4 The foundations of mixed methods research	34		
2.5 Working with mixed methods approaches	38		
2.6 Stages in mixed methods research	48		
2.7 Conclusion	48		
3 Critical educational research	51		
3.1 Critical theory and critical educational research	51		
3.2 Criticisms of approaches from critical theory	54		
3.3 Participatory research and critical theory	55		
3.4 Feminist research	58		
3.5 A note on post-colonial theory and queer theory	63		
3.6 Value-neutrality in educational research	63		
3.7 A summary of three major paradigms	65		
4 Theory in educational research	68		
4.1 What is theory?	68		
4.2 Why have theory?	71		
4.3 What makes a theory interesting?	71		
4.4 Types of theory	72		
4.5 Where does theory come from?	76		
4.6 Questions about theory for researchers	77		
4.7 Conclusion	77		
5 Evaluation and research	79		
5.1 Similarities and differences between research and evaluation	79		
5.2 Evaluation research and policy making	82		
5.3 Research, evaluation, politics and policy making	83		

6	The search for causation	87	8	Ethics in Internet research	144
6.1	Introduction	87	8.1	What is Internet research?	144
6.2	Causes and conditions	87	8.2	What are key ethical issues in Internet research?	144
6.3	Causal inference and probabilistic causation	88	8.3	Informed consent	145
6.4	Causation, explanation, prediction and correlation	92	8.4	Public and private matters	146
6.5	Causal over-determination	94	8.5	Confidentiality and anonymity	148
6.6	The timing and scope of the cause and the effect	95	8.6	Ethical codes for Internet research	149
6.7	Causal direction, directness and indirectness	96	8.7	Conclusion	152
6.8	Establishing causation	96	9	Choosing a research project	153
6.9	The role of action narratives in causation	98	9.1	Introduction	153
6.10	Researching causes and effects	99	9.2	What gives rise to the research project?	153
6.11	Researching the effects of causes	101	9.3	The importance of the research	156
6.12	Researching the causes of effects	103	9.4	The purposes of the research	157
6.13	Conclusion	107	9.5	Ensuring that the research can be conducted	158
			9.6	Considering research questions	160
			9.7	The literature search and review	161
			9.8	Summary of key issues in choosing a research topic or project	162
PART 2			10	Research questions	165
Research design		109	10.1	Why have research questions?	165
7	The ethics of educational and social research	111	10.2	Where do research questions come from?	165
7.1	Introduction	111	10.3	What kinds of research question are there?	166
7.2	Ethical principles and the nature of ethics in educational research	112	10.4	Devising your research question(s)	167
7.3	Sponsored research	114	10.5	Making your research question answerable	169
7.4	Regulatory contexts of ethics	115	10.6	How many research questions should I have?	172
7.5	Choice of research topic and research design	120	10.7	A final thought	172
7.6	Informed consent	122	11	Research design and planning	173
7.7	Non-maleficence, beneficence and human dignity	127	11.1	Introduction	173
7.8	Privacy	128	11.2	Approaching research planning	174
7.9	Anonymity	129	11.3	Research design and methodology	175
7.10	Confidentiality	130	11.4	From design to operational planning	177
7.11	Against privacy, confidentiality and anonymity	130	11.5	A framework for planning research	177
7.12	Deception	132	11.6	Conducting and reporting a literature review	181
7.13	Gaining access and acceptance into the research setting	134	11.7	Searching for literature on the Internet	183
7.14	Power and position	136	11.8	How to operationalize research questions	185
7.15	Reciprocity	137	11.9	Distinguishing methods from methodologies	186
7.16	Ethics in data analysis	137	11.10	Data analysis	186
7.17	Ethics in reporting and dissemination	139	11.11	Presenting and reporting the results	186
7.18	Responsibilities to sponsors, authors and the research community	141	11.12	A planning matrix for research	188
7.19	Conclusion	141			

11.13	Managing the planning of research	194	
11.14	A worked example	196	
11.15	Ensuring quality in the planning of research	201	
12	Sampling	202	
12.1	Introduction	202	
12.2	The sample size	203	
12.3	Sampling error	209	
12.4	Statistical power and sample size	211	
12.5	The representativeness of the sample	212	
12.6	The access to the sample	213	
12.7	The sampling strategy to be used	214	
12.8	Probability samples	214	
12.9	Non-probability samples	217	
12.10	Sampling in qualitative research	223	
12.11	Sampling in mixed methods research	224	
12.12	Planning a sampling strategy	225	
12.13	Conclusion	226	
13	Sensitive educational research	228	
13.1	Introduction	228	
13.2	What is sensitive research?	228	
13.3	Sampling and access	230	
13.4	Ethical issues in sensitive research	233	
13.5	Effects of sensitive research on the researcher	236	
13.6	Researching powerful people	237	
13.7	Researching powerless and vulnerable people	240	
13.8	Asking questions	242	
13.9	Conclusion	243	
14	Validity and reliability	245	
14.1	Defining validity	245	
14.2	Validity in quantitative research	246	
14.3	Validity in qualitative research	247	
14.4	Validity in mixed methods research	250	
14.5	Types of validity	252	
14.6	Triangulation	265	
14.7	Ensuring validity	267	
14.8	Reliability	268	
14.9	Reliability in quantitative research	268	
14.10	Reliability in qualitative research	270	
14.11	Validity and reliability in interviews	271	
14.12	Validity and reliability in experiments	276	
14.13	Validity and reliability in questionnaires	277	
14.14	Validity and reliability in observations	278	
14.15	Validity and reliability in tests	279	
14.16	Validity and reliability in life histories	283	
14.17	Validity and reliability in case studies	284	
	PART 3		
	Methodologies for educational research	285	
15	Qualitative, naturalistic and ethnographic research	287	
15.1	Foundations of qualitative, naturalistic and ethnographic inquiry	288	
15.2	Naturalistic research	292	
15.3	Ethnographic research	292	
15.4	Critical ethnography	294	
15.5	Autoethnography	297	
15.6	Virtual ethnography	299	
15.7	Phenomenological research	300	
15.8	Planning qualitative, naturalistic and ethnographic research	301	
15.9	Reflexivity	302	
15.10	Doing qualitative research	303	
15.11	Some challenges in qualitative, ethnographic and naturalistic approaches	320	
16	Historical and documentary research	323	
	JANE MARTIN		
16.1	Introduction	323	
16.2	Some preliminary considerations: theory and method	323	
16.3	The requirements and process of documentary analysis	325	
16.4	Some problems surrounding the use of documentary sources	325	
16.5	The voice of the past: whose account counts?	326	
16.6	A worked example: a biographical approach to the history of education	328	
16.7	Conclusion	332	
17	Surveys, longitudinal, cross-sectional and trend studies	334	
17.1	Introduction	334	
17.2	What is a survey?	334	
17.3	Advantages of surveys	334	
17.4	Some preliminary considerations	336	
17.5	Planning and designing a survey	337	
17.6	Survey questions	340	
17.7	Low response, non-response and missing data	341	
17.8	Survey sampling	345	
17.9	Longitudinal and cross-sectional surveys	347	
17.10	Strengths and weaknesses of longitudinal, cohort and cross-sectional studies	349	

17.11	Postal, interview and telephone surveys	352		
17.12	Comparing methods of data collection in surveys	357		
18	Internet surveys	361		
18.1	Introduction	361		
18.2	Advantages of Internet surveys	361		
18.3	Disadvantages of Internet surveys	362		
18.4	Constructing Internet-based surveys	363		
18.5	Ethical issues in Internet-based surveys	367		
18.6	Sampling in Internet-based surveys	372		
18.7	Improving response rates in Internet surveys	372		
18.8	Technological advances	374		
19	Case studies	375		
19.1	What is a case study?	375		
19.2	Types of case study	377		
19.3	Advantages and disadvantages of case study	378		
19.4	Generalization in case study	380		
19.5	Reliability and validity in case studies	381		
19.6	Planning a case study	382		
19.7	Case study design and methodology	384		
19.8	Sampling in case studies	386		
19.9	Data in case studies	387		
19.10	Writing up a case study	388		
19.11	What makes a good case study researcher?	389		
19.12	Conclusion	390		
20	Experiments	391		
20.1	Introduction	391		
20.2	Randomized controlled trials	391		
20.3	Designs in educational experiments	401		
20.4	True experimental designs	402		
20.5	Quasi-experimental designs	406		
20.6	Single-case ABAB design	408		
20.7	Procedures in conducting experimental research	409		
20.8	Threats to internal and external validity in experiments	411		
20.9	The timing of the pre-test and the post-test	412		
20.10	The design experiment	413		
20.11	Internet-based experiments	415		
20.12	<i>Ex post facto</i> research	418		
20.13	Conclusion	425		
21	Meta-analysis, systematic reviews and research syntheses	427		
	HARSH SURI			
21.1	Introduction	427		
21.2	Meta-analysis	428		
21.3	Systematic reviews	430		
21.4	Methodologically inclusive research syntheses	431		
21.5	Conclusion	439		
22	Action research	440		
22.1	Introduction	440		
22.2	Defining action research	441		
22.3	Principles and characteristics of action research	443		
22.4	Participatory action research	444		
22.5	Action research as critical praxis	445		
22.6	Action research and complexity theory	448		
22.7	Procedures for action research	448		
22.8	Reporting action research	452		
22.9	Reflexivity in action research	453		
22.10	Ethical issues in action research	454		
22.11	Some practical and theoretical matters	454		
22.12	Conclusion	456		
23	Virtual worlds, social network software and netography in educational research	457		
	STEWART MARTIN			
23.1	Introduction	457		
23.2	Key features of virtual worlds	457		
23.3	Social network software	458		
23.4	Using virtual worlds and social media in educational research	458		
23.5	Netography, virtual worlds and social media network software	459		
23.6	Opportunities for research with virtual worlds, social network software and netography	461		
23.7	Ethics	463		
23.8	Guidelines for practice	464		
23.9	Data	465		
23.10	Conclusion	467		
	PART 4			
	Methods of data collection	469		
24	Questionnaires	471		
24.1	Introduction	471		
24.2	Ethical issues	471		
24.3	Planning the questionnaire	472		

24.4	Types of questionnaire items	475	
24.5	Asking sensitive questions	489	
24.6	Avoiding pitfalls in question writing	490	
24.7	Sequencing questions	492	
24.8	Questionnaires containing few verbal items	493	
24.9	The layout of the questionnaire	493	
24.10	Covering letters/sheets and follow-up letters	495	
24.11	Piloting the questionnaire	496	
24.12	Practical considerations in questionnaire design	498	
24.13	Administering questionnaires	501	
24.14	Processing questionnaire data	504	
25	Interviews		506
25.1	Introduction	506	
25.2	Conceptions of the interview	507	
25.3	Purposes of the interview	508	
25.4	Types of interview	508	
25.5	Planning and conducting interviews	512	
25.6	Group interviewing	527	
25.7	Interviewing children	528	
25.8	Interviewing minority and marginalized people	531	
25.9	Focus groups	532	
25.10	Non-directive, focused, problem-centred and in-depth interviews	533	
25.11	Telephone interviewing	535	
25.12	Online interviewing	538	
25.13	Ethical issues in interviewing	540	
26	Observation		542
26.1	Introduction	542	
26.2	Structured observation	545	
26.3	The need to practise structured observation	550	
26.4	Analysing data from structured observations	550	
26.5	Critical incidents	551	
26.6	Naturalistic and participant observation	551	
26.7	Data analysis for unstructured observations and videos	555	
26.8	Natural and artificial settings for observation	555	
26.9	Video observations	556	
26.10	Timing and causality with observational data	558	
26.11	Ethical considerations in observations	558	
26.12	Reliability and validity in observations	560	
26.13	Conclusion	562	
27	Tests		563
27.1	Introduction	563	
27.2	What are we testing?	563	
27.3	Parametric and non-parametric tests	565	
27.4	Diagnostic tests	565	
27.5	Norm-referenced, criterion-referenced and domain-referenced tests	565	
27.6	Commercially produced tests and researcher-produced tests	567	
27.7	Constructing and validating a test	568	
27.8	Software for preparation of a test	583	
27.9	Devising a pre-test and post-test	583	
27.10	Ethical issues in testing	584	
27.11	Computerized adaptive testing	585	
28	Using secondary data in educational research		586
28.1	Introduction	586	
28.2	Advantages of using secondary data	587	
28.3	Challenges in using secondary data	588	
28.4	Ethical issues in using secondary data	589	
28.5	Examples of secondary data analysis	589	
28.6	Working with secondary data	589	
28.7	Conclusion	592	
29	Personal constructs		593
	RICHARD BELL		
29.1	Introduction	593	
29.2	Strengths of repertory grid technique	594	
29.3	Working with personal constructs	595	
29.4	Grid analysis	599	
29.5	Some examples of the use of the repertory grid in educational research	600	
29.6	Competing demands in the use of the repertory grid technique in research	604	
29.7	Resources	605	
30	Role-play and research		606
	CARMEL O'SULLIVAN		
30.1	Introduction	606	
30.2	Role-play pedagogy	607	
30.3	What is role-play?	608	
30.4	Why use role-play in research?	610	
30.5	Issues to be aware of when using role-play	612	
30.6	Role-play as a research method	616	

30.7	Role-play as a research method: special features	616	35.2	A conversational analysis	688
30.8	A note of caution	617	35.3	Narrative analysis	694
30.9	How does role-play work?	617	35.4	Autobiography	698
30.10	Strategies for successful role-play	618	35.5	Conclusion	700
30.11	Examples of research using role-play	623			
30.12	A note on simulations	626			
31	Visual media in educational research	628	36	Analysing visual media	702
31.1	Introduction	628	36.1	Introduction	702
31.2	Who provides the images?	630	36.2	Content analysis	704
31.3	Photo-elicitation	630	36.3	Discourse analysis	705
31.4	Video and moving images	633	36.4	Grounded theory	706
31.5	Artefacts	634	36.5	Interpreting images	707
31.6	Ethical practices in visual research	636	36.6	Interpreting an image: a worked example	708
			36.7	Analysing moving images	712
			36.8	Conclusion	713
PART 5			37	Grounded theory	714
Data analysis and reporting		641	37.1	Introduction	714
32	Approaches to qualitative data analysis	643	37.2	Versions of grounded theory	715
32.1	Elements of qualitative data analysis	643	37.3	Stages in generating a grounded theory	717
32.2	Data analysis, thick description and reflexivity	647	37.4	The tools of grounded theory	717
32.3	Ethics in qualitative data analysis	650	37.5	The strength of the grounded theory	721
32.4	Computer assisted qualitative data analysis (CAQDAS)	650	37.6	Evaluating grounded theory	721
33	Organizing and presenting qualitative data	657	37.7	Preparing to work in grounded theory	722
33.1	Tabulating data	657	37.8	Some concerns about grounded theory	722
33.2	Ten ways of organizing and presenting data analysis	661			
33.3	Narrative and biographical approaches to data analysis	664	38	Approaches to quantitative data analysis	725
33.4	Systematic approaches to data analysis	665	38.1	Introduction	725
33.5	Methodological tools for analysing qualitative data	666	38.2	Scales of data	725
34	Coding and content analysis	668	38.3	Parametric and non-parametric data	727
34.1	Introduction	668	38.4	Descriptive and inferential statistics	727
34.2	Coding	668	38.5	Kinds of variables	728
34.3	Concerns about coding	673	38.6	Hypotheses	730
34.4	What is content analysis?	674	38.7	One-tailed and two-tailed tests	732
34.5	How does content analysis work?	675	38.8	Confidence intervals	733
34.6	A worked example of content analysis	680	38.9	Distributions	733
34.7	Reliability in content analysis	684	38.10	Conclusion	737
35	Discourses: conversations, narratives and autobiographies as texts	686	39	Statistical significance, effect size and statistical power	739
35.1	Discourse analysis and critical discourse analysis	686	39.1	Introduction	739
			39.2	Statistical significance	739
			39.3	Concerns about statistical significance	742
			39.4	Hypothesis testing and null hypothesis significance testing	744
			39.5	Effect size	745
			39.6	Statistical power	749
			39.7	Conclusion	752
			40	Descriptive statistics	753
			40.1	Missing data	753
			40.2	Frequencies, percentages and crosstabulations	754

40.3	Measures of central tendency and dispersal	762	43.2	What to look for in factor analysis output	826
40.4	Taking stock	765	43.3	Cluster analysis	828
40.5	Correlations and measures of association	765	43.4	A note on structural equation modelling	833
40.6	Partial correlations	772	43.5	A note on multilevel modelling	836
40.7	Reliability	774			
41	Inferential statistics: difference tests	776	44	Choosing a statistical test	839
41.1	Measures of difference between groups	776	44.1	Introduction	839
41.2	The t-test	777	44.2	Sampling issues	839
41.3	Analysis of Variance	781	44.3	The types of data used	841
41.4	The chi-square test	789	44.4	Choosing the right statistic	841
41.5	Degrees of freedom	792	44.5	Assumptions of tests	841
41.6	The Mann-Whitney and Wilcoxon tests	794	45	Beyond mixed methods: using Qualitative Comparative Analysis (QCA) to integrate cross-case and within-case analyses	847
41.7	The Kruskal-Wallis and Friedman tests	797		BARRY COOPER AND JUDITH GLAESSER	
41.8	Conclusion	801	45.1	Introduction	847
42	Inferential statistics: regression analysis and standardization	802	45.2	Starting from a 'quantitative' stance	848
42.1	Regression analysis	802	45.3	Starting from a 'qualitative' stance	850
42.2	Simple linear regression	803	45.4	Qualitative Comparative Analysis (QCA)	850
42.3	Multiple regression	805	45.5	QCA: sufficiency	852
42.4	Standardized scores	814	45.6	Conclusion	853
42.5	Conclusion	817			
43	Factor analysis, cluster analysis and structural equation modelling	818	<i>Bibliography</i>		855
43.1	Conducting factor analysis	818	<i>Index</i>		907