

RESEARCHING EDUCATION

2ND EDITION

DATA METHODS AND THEORY
IN EDUCATIONAL ENQUIRY

By
DAVID SCOTT
ROBIN USHER

'A rigorous and thought-provoking text which challenges the intellectual sloppiness that informs much educational research. The book challenges us constantly to reconsider our own assumptions and those of others in evaluating the claims that are made about what research does and does not, can or cannot, tell us.'

Richard Edwards, Professor of Education and Head of The Stirling Institute of Education, University of Stirling, UK

'An elegant tour through the key philosophical positions on research and a detailed and practical description of approaches and methods common in educational research. It will serve as an excellent text for new researchers and those wishing to understand the implications of the approaches and methods they are using.'

Alison Lee, Professor of Education and Director of the Centre for Research in Learning and Change, University of Technology, Sydney, Australia

Researching Education explores the theory and practice of researching education and examines the philosophical, historical, political and social contexts of research, and the implications of these for data collection and analysis.

David Scott and Robin Usher argue that while power is ever present in the construction of research texts, this is inevitable as research imposes a closure of the world through representation and so is always and inevitably involved with and implicated in the operation of power.

The book addresses fundamental questions such as:

What is legitimate knowledge?

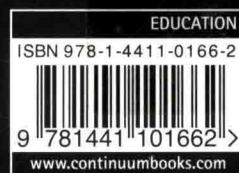
What is the relationship between the collection and analysis of data?

How does the researcher's presence in the field impact on their data?

This new edition has been completely revised to reflect new insights into education research and educational research methodology, and the impact of recent political initiatives. It also includes new material on feminist approaches to research and the means for determining the worth of research texts.

David Scott is Professor of Curriculum, Pedagogy and Assessment, and Faculty Director of Teaching and Learning at the Institute of Education, University of London, UK.

Robin Usher was Professor of Research Education and Director of Research Training at RMIT University, Melbourne, Australia. He is now a freelance consultant.



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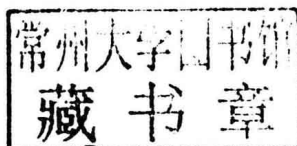
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in Educational Enquiry

2nd edition

David Scott and
Robin Usher



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Preamble

In this book, we examine the theory and practice of researching education, focusing on the philosophical, historical, political and social contexts of research and the implications of these for the collection and analysis of data. In doing this, we address such questions as: *What is knowledge? What is the relationship between the collection and analysis of data? How does the researcher's presence in the field affect their data? How reliable and valid are conclusions drawn from particular collections of data? and How do educational research methods and indicators relate to epistemological and ontological frameworks?* Above all, we seek to problematize the practice of research and examine how power is ever present in the construction of research texts. In a previous book (Scott and Usher, 1996: 176), we suggested that research was

always political, although it is important to emphasise that what we mean by this is not that research is always political in a partisan sense nor indeed that it is deliberately biased and distorted so that it serves the interests of dominant groups. What we are emphasising rather is that research imposes a closure of the world through the operation of power.

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We suggested three other reasons for tying closely together power and knowledge: research takes place within settings whose structuring depends on micropolitical processes; since in education there is no single correct research procedure and no superordinate methodology, power relations feature in and between research traditions; and social research is always valued research, in that both the values of participants in the research and the values of the researcher himself or herself are central to the construction of research texts. Researchers therefore need to take account of the *evaluative, critical and emergent* implication(s) of factual discourse, and not characterize research texts as exemplars of universal knowledge, operating outside of time and space.

In contrast, educational research is frequently understood as

- the making of nomothetic statements about educational activities, structures and systems;
- the settling of educational disputes by a-theoretical and value-free empirical enquiry;
- the suspension of the values, preconceptions and epistemological frameworks of the researcher, resulting in a lack of reference to these in the research text;
- the development of theoretical knowledge of education, which is superior to practical knowledge, with the result that practice is understood as the efficient application of theoretical knowledge constructed by professional researchers; and
- the designation of a correct algorithmic method for collecting educational data.

In this book, we suggest, through close examination of the various issues surrounding research, that this viewpoint neglects, indeed acts to conceal, those epistemological and ontological frameworks that underpin all types of research activity. What this implies is that power is central to the research act and that we simply cannot dismiss it from our epistemological endeavours but must try to understand its effects. This involves a reflexive understanding of the way in which we are positioned as knowers, and it suggests that the scientific paradigm of a singular, convergent and static reality that can be known by researchers who act independently from the subjects of their research and who produce generalizations and nomothetic statements is not sustainable. In part, this is because objects in the real world have emergent properties, and in part, this reflects the possibility of a disjuncture between knowledge and its referents.

Conspectus

Part 1 of the book examines the philosophical context of educational research. We begin by problematizing the idea of research as a technology, a set of methods, skills and procedures to be implemented. Research is understood as a social practice, in which relations of power are always present. This is contrasted with positivist-empiricist research, which may be understood as having the following characteristics: determinacy (there is a certain truth that can be known), rationality (there are no contradictory explanations), impersonality (the more objective and the less subjective the better) and prediction (research is the making of knowledge claims in the form of generalizations from which predictions can be made, and events and phenomena controlled). This has been criticized for offering a false picture of reality, certainly in the social sciences and possibly in the natural sciences as well.

Three alternatives are suggested in this book. The first of these is interpretivism. Here, the emphasis is on human action, and the assumption is made that it is meaningful and hence has to be interpreted and understood. The philosophical tradition of phenomenology from its earliest surfacings in the writings of Edmund Husserl (1960) (Husserl et al., 2001; Kolakowski, 2001) to the later mature hermeneutics of Hans-Georg Gadamer (2004) exemplifies this. The second alternative has come to be known as the critical theory tradition, the leading proponent of which is Jürgen Habermas (1987) (see also Steinhoff, 2009). Critical theory is *critical* in the sense that it challenges both the positivist/empiricist and hermeneutic/interpretive traditions of social research and refers to the detecting and unmasking of beliefs and practices that limit human freedom. The third alternative is post-positivism or postmodernism.

Proponents of these alternatives argue that research, even scientific research, is a product of certain kinds of social, historically located, practices. Post-positivism, for example, reflects a distrust of absolutes and foundational truths. No longer does following the correct method guarantee true results. And as will have become obvious from this brief discussion, we are suggesting that the research process cannot be properly understood without addressing epistemological and ontological concerns. Indeed, this is our starting point. Most educational researchers either deny the relevance of these issues or deem it unnecessary to surface those ontological and epistemological frameworks

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that underpin their collections of data about educational activities, institutions and systems.

Chapter 4 provides an account of the four research strategies commonly used by educational researchers: induction, deduction, retroduction and abduction. The first of these, where theory building always proceeds from the collection of observable facts, has been criticized on two grounds: data can never be free of the preconceptions and frameworks of the data collector, and any theory developed may be falsified by new facts that come to light. The deductive approach has been criticized because it fails to take account of those mechanisms that drive events and activities but which may not be reflected in the constant conjunction of observable events. Retroduction in turn has been criticized for a belief in realism, albeit of an indirect kind, which includes the existence of unobservable entities. Abductive researchers argue that we can only know the world through the eyes of the social actors who both produce and reproduce it. There are weak and strong versions. In the first case, researchers should never go beyond the constructs used by participants; in the second, although observer constructs should be anchored in lay concepts, it is legitimate for the researcher to use constructs that lay actors do not initially recognize.

Part 2 examines the different methods used by educational researchers, always mindful that a method is used in a particular way and for a particular purpose, and this orientation is always buttressed by wider concerns. We begin with an exploration of the experimental method as it is used in educational and social research. As with all the different approaches discussed in this book, we offer a sustained critique. We argue that the experimental method is deficient for five reasons. The first of these is that the effects of interventions may be more subtle or difficult to conceptualize than experimentalists would permit. Furthermore, the method may be inappropriate for examining those causal mechanisms that underpin social life because experimentalists adopt a successionist rather than a generative theory of causation. They also make the assumption that background and context are not central to the research process. Experimentalists fail to adequately solve the problem of ecological validity, which is that since they construct artificial settings for examining human behaviour, they cannot then be certain that other human beings will behave like this outside them. Finally, there are ethical problems with experimentation because the method is discriminatory, even if participants do not know until the end of the experiment who is being discriminated against.