Preface

TARGET AUDIENCE

This book is designed for academics and students taking courses of study on research methods. The book can be used by academics teaching education research methods to assist their students to:

1. Understand the centrality and power of the research paradigm;
2. Describe, locate and compare alternative approaches to education research;
3. Identify their own research interests and motivations and to locate them within a paradigm;
4. Design research proposals and interpret findings;
5. Read and critique research publications and papers.

This book is also designed to inform and support education researchers, post-graduate research students and their supervisors, and others engaging in education research, such as academic developers in universities and teachers in schools.

In this book, the research paradigm takes prime position. The paradigm may be used to inform research design and implementation. The research paradigm provides a basis for choices about data collection strategies and data analysis techniques, and decisions about the nature and form of the findings and the conclusions that can be drawn. That is not to say that a research endeavor needs to start with a paradigm; the particular research exercise is likely to be initiated by a research interest or research question. What is contended here is that, whatever initiates a research interest, being clear about the paradigm in which the research is conducted is critical in ensuring all elements of the research exercise are congruent.

COMPONENTS

The first section of the book, in Chapters 1 and 2, includes the conceptual base for the publication. In Chapter 1 the concept of research paradigms and the typology employed is introduced. Lorraine Ling, in Chapter 2, goes on to elaborate a framework for the design, implementation and interpretation of research in education, based on research paradigms. She discusses elements of research paradigms in detail. Section 1 of the book includes a chapter by Fraser and Pechenkina (Chapter 3), reflecting on the research paradigms employed in articles in two education development research journals. The neopositivist paradigm in the inductive mode emerged as the dominant paradigm in both journals. Robertson,
in Chapter 4, suggests how, with better understanding of research paradigms, doctoral candidates and their supervisors can deepen their philosophical, and meaning-making constructs.

The following sections of the book provide reflections on research methods and research paradigms in a variety of education research projects or specialist areas. The Sections relate to the paradigm typology employed in the book.

Section 2 provides instances of research based on an understanding of patterns and consistencies in areas of educational practice. Devlin, in Chapter 5, reviews a case study, informed by the neo-positivist research paradigm, involving an approach to improving teaching in higher education. Pollock and Hauseman, in Chapter 6, reflect on conclusions that may be reached and issues arising in the use of observation in an investigation of the work of school principals. In Chapter 7 Leder critiques research methods and instruments employed in an investigation of school mathematics performance and affect. In Chapter 8 Smith reflects on the use of Structural Equation Modelling for the exploration of the impact of aspects of curriculum design on student learning and satisfaction.

Reflections on instances of interpretivist research are reported in Section 3. Kelly, in Chapter 9, reviews her work on teachers’ ontological and epistemological beliefs and the impact of those beliefs on approaches to teaching. In Chapter 10 King provides a characterization of students’ approaches to learning mathematics in the context of an engineering mathematics course. He reflects on possible implications of the study for the teaching of engineering mathematics. Vicars, in Chapter 11, provides a research analysis that can be seen as relating to the transformative research paradigm. He reviews “queerly” located enquiry and declares it “a code of our own.” The chapter draws on queerly operationalized research projects that involved investigation of same-sex sexualities, sexuality-related diversity, equality and inclusion in educational domains.

Research commissioned to address practical issues, in a political context, is addressed in Section 4. Livingston, in Chapter 12, reflects on understandings of the researcher and of commissioning bodies where education research projects are commissioned by government agencies, and on the consequences for selection of a research paradigm. In Chapter 13 Peter Ling reports on a commissioned transnational education research project focused on arrangements for leadership and concludes that the pragmatic paradigm applied.

Section 5 is entitled “Shifting Sands,” reviewing instances of what Lang, in Chapter 14 refers to as “paradigm surfing.” Lang reflects on her journey through several paradigms in conducting education research in the computing discipline. Mackenzie, in Chapter 15, focuses on a research journey and the conscious and subconscious application of paradigms to research design in researching the learning and teaching of writing. Giridharan, in Chapter 16, reviews a study she undertook investigating lexical inferencing strategies employed by second language learners. She notes a paradigm shift as the study progressed through stages. In Chapter 17 Calway, while arguing for adoption of the neo-positivist research paradigm, looks at a range of issues and paradigm possibilities in investigating work-integrated learning.

Section 6 relates to the possibilities of a “supercomplexity” research paradigm. Barnett, in Chapter 18, revisits and extends his work on the university in an age of supercomplexity and its implications for research in education. He refers to planes, possibilities and poetry in researching supercomplexity. Authors of the two following chapters, upon reflection, place the work they refer to in the supercomplexity paradigm. Selkri and Keamy, in Chapter 19, refer to becoming comfortable with supercomplexity. They describe themselves as rhizome researchers with many conceptual tools and practices available to open new types of inquiry. Rose, in Chapter 20, identifies five categories of contribution by the “Black Academy” in Australian higher education today and styles the result “a supercomplex renaissance.”
USING THE BOOK

Readers are encouraged to start with Chapter 1, which introduces the research paradigm framework used in the book and its implications for the design and critique of education research, and then to engage with the more detailed definition of research paradigms provided in Chapter 2. From there you may wish to peruse chapters where the particular research paradigm or the subject of the research is of interest to you. Chapters portray practical experience in working through research method and research paradigm issues. It needs to be acknowledged that applying research paradigms is not all plain sailing in the practical situation. Nevertheless, the hope here is that reflection on matters addressed in the following chapters will assist in providing a sound platform both for critique of education research and for ensuring coherence in research design.

Lorraine Ling
Victoria University, Australia & La Trobe University, Australia

Peter Ling
Swinburne University of Technology, Australia