Chapter 21

Conclusion: Paradigm Paradiddle

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ABSTRACT

Authors of the chapters of this book have reflected on education research undertakings and research paradigms applicable to their work. Their writing is revisited here as it links education research in practice to underpinning understandings of the nature of the aspect of the world investigated, the drivers of the research and the contributions to knowledge that emerge. Instances that fit within or move between established research paradigms are addressed first. The case for a new research paradigm—the supercomplexity paradigm—is then rehearsed and contributions of chapter authors to that concept and its application summarized. While research reviewed in the chapters covers the full array of paradigms, the endeavors portrayed are linked by the act of research itself. In this endeavor, whatever the education research topic, approach and methods employed, being clear about the research paradigm that applies helps in ensuring the research exercise is coherent and the outcomes appropriate and defensible.

As any drum-playing researcher reading this book will know, research is sometimes like a paradiddle in that it involves particular patterns and phases; tempos and beats. A paradiddle is an exercise performed by a drummer, consisting of a series of patterns and tempos with the possibility of dramatic expression at points. It takes practice to master it to perfection. In this book, the various authors have demonstrated how research moves through specific phases and tempos, sometimes increasing in intensity at points. As for the paradiddle, research mastery requires understanding of the exercise and practice in application.

The particular phase of the research during which they focus on the research paradigm can vary between researchers. For some, pinpointing the paradigm or paradigms within which they will undertake their research occurs as they begin their research study; carefully and deliberately working through their ontology, epistemology, axiology, intent and desired outcomes. For others it may be as the research study unfolds and increases in momentum and complexity that they begin to ground the research according are

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to the elements of a particular research paradigm. For other researchers, the paradigm is considered at the end, as the research and findings begin to point to conclusions; assisting them to place the study in a particular frame. There are, of course, others who do not consider the paradigm except retrospectively, when specifically asked or challenged to do so. If we are honest, there are many for whom the notion of paradigms is not a part of their research repertoire or lexicon; the paradigm remains an unknown.

We have focused attention in this book on six paradigms of research—the positivist, neo-positivist, interpretivist, pragmatic, transformative and supercomplexity. The first five paradigms are well established. Supercomplexity, however, is a research paradigm that we have added, drawing on the work of Barnett (Barnett, 2000; see also Chapter 18). We have illustrated how each paradigm reflects a particular ontology, epistemology, axiology, intent or motivation and related outcome. It has been shown that paradigms, as well as being organizational and analytical devices used to categorize research undertakings, can be concepts that transform thinking about oneself as a researcher, a teacher or a learner.

PARADIGMS OF EDUCATION RESEARCH: PATTERNS AND INTERPRETATIONS

Turning attention to the five established research paradigms, the first listed is the positivist paradigm. The applicability of the positivist paradigm to education research in the current era may be challenged. It is included here for two reasons. With its ontological underpinning of a discoverable reality, it serves as a conceptual base for distinguishing other paradigms. In addition, for some reported current education research, the structure of the research and the ontology implicit continues to be positivist. In Chapters 1 and 2, we address several post-positivist paradigms; post-positivist in the sense of being adopted as an alternative to the positivist paradigm. One we have labelled “neo-positivist” because it shares something of the ontology of the positivist paradigm—the existence of an ordered reality. It is distinguished from the positivist position by an understanding that reality may be patterned, local and subject to change over time and by a recognition of the limitations of researchers. Research in the neo-positivist paradigm may explore and test existing understandings, which we have labelled the deductive mode, or may seek to fill a gap in present knowledge, which we have labelled the inductive mode. Other paradigms addressed are the interpretivist and transformative. These two paradigms share the ontological understanding that, whatever the reality of the social world, all that is available to us is what we can apprehend within our human limitations. Hence the outcomes of research are evidenced interpretations of the researcher working with the researched. Multiple defensible interpretations of a research subject can be available simultaneously. The transformative paradigm is distinguished by a concern with human rights and social justice and the endeavor to produce an evidenced, socially-constructed understanding with potential to support empowered action. We have included a pragmatic paradigm in our framework as an approach to research unencumbered by ontological or methodological constraints but driven by the need to find a practical solution to a problem. Pragmatic research is often undertaken as a commissioned investigation.

In this book we have presented a range of researchers’ reflections on a paradigm or paradigms as it plays out in their own research studies. Several chapters relate to the neo-positivist paradigm. Leder (Chapter 7) has focused on research methods employed in investigating mathematics in schools. She demonstrates how methods change and adapt according to the situation and changing understandings. Leder has also demonstrated how previously commonplace methods can be updated and changed through the influence of technology, thus making them more evocative and effective as research tools. Leder concludes that the extensive, ever-changing and complex array of methods available to a researcher
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