

*Review article for Teacher Development*

## **Prioritising paradigms, mixing methods, and characterising the 'qualitative' in educational research**

Keith S. Taber

University of Cambridge Faculty of Education

*Methods in Educational Research: From theory to practice* (Second Edition),

Marguerite G. Lodico, Dean T. Spaulding, Katherine H. Voegtle, 2010.

ISBN: 978-0-470-43680-6, Paperback, 544 pages. San Francisco: Jossey-Bass, US \$85.00.

*Research Design: Qualitative, quantitative, and mixed methods approaches* (Third Edition), John W. Creswell, 2009. Thousand Oaks, California: Sage Publications.

Paperback, 296 pages - ISBN 9781412965576, \$67.95

*The Qualitative Dissertation: A guide for students and faculty* (Second Edition),

Maria Piantanida & Noreen B. Garman, 2009. Thousand Oaks, California Corwin.

Paperback, 328 pages - ISBN: 9781412951081, £24.99

There seems to be a continuous flow of new and revised books to support the teaching and learning of research methods in education and related fields. At one level, this is to be welcomed in an area such as research methodology where there is no single, widely accepted and coherent overview of the subject. The availability of diverse voices and approaches represented through different texts offers more options for the teacher-researcher or research student trying to find a way of engaging with research which makes sense to them, and illuminates their own research agenda. This is

especially important when teachers and education students have such a wide range of disciplinary backgrounds, and work in such varying professional contexts.

However, it is equally the case that the range of apparently inconsistent ways of conceptualising research must be confusing and frustrating for many of those setting out on research for the first time. It is very hard to get one's head around paradigms and methodologies and the like when different writers not only use different terms, but actually seem to impose very different basic structures and boundaries on the conceptual space of educational research.

Given the range of books available, there is much choice of style and approach, and so both opportunity and challenge for those recommending or selecting texts for use with students. The volumes reviewed here offer quite different images of educational research, but have in common that they have passed the test of being considered worthy of revision for new editions. Two of these books aim to offer a broad coverage of the spectrum of approaches possible in research studies, although arguably putting emphasis on either a 'scientific' notion of research (Hammersley, 2004) or the potential of 'mixed methods' approaches (Roth, 2009); whereas the third very much focuses on 'qualitative' research (Hand, 2003). Together then, these texts offer a something of a 'purposive sample' of the range of educational research texts currently on offer to students.

### **Ontologies of educational research**

Students new to educational research often look for a simple and clear outline of the nature of educational research. Instead they are often faced with a range of sources, which not only suggest that there are several quite different approaches to educational research, but then proceed to describe, label, and structure the field in very different ways. Given the complex range of issues and perspectives that impinge upon educational research, this is both understandable, and likely to remain the case, even if it is an unwelcome situation for most students. Often students gravitate towards a preferred text, which they feel offers a basis for making sense of their own research. Yet, they can also feel quite uncomfortable if their project cannot easily be fitted into a scheme that classmates commonly adopt for characterising their own research. The importance of locating yourself within a paradigmatic tradition as a starting point for

designing a research study is often emphasised in teaching, but may seem challenging or even mysterious to novice researchers.

The graduate students on the Educational Research course the reviewer teaches on often take up Crotty's (2006) approach to describing research designs. Crotty discusses four levels of thinking about research - epistemology, theoretical perspective, methodology, methods – and students commonly seek to base their accounts of their own research designs around finding suitable labels for each of these four levels. This approach works well for many projects, but some students find they cannot readily come up with a coherent set of clear descriptors that fit their own research as they move from epistemology through theoretical perspective to methodology. A student in this position can feel frustrated or even inadequate if they assume that Crotty's book, a recommended text, is offering *the* ontology of how educational research *is*. In practice, educational research is a complex and somewhat contested field, and it is unlikely any simple typology or formalism for characterising research designs will offer both a comprehensive approach and an assurance of a ready fit to projects.

Given the complexity of the field, then, it is important both that students are introduced to the diverse, complex and nuanced nature of educational research, and that they are provided with tools for making sense of the great range of possible research designs that might be appropriate in different enquiry contexts. Yet it is important to appreciate the need for coherence between the framing of research questions and all that follows in a study: something that often derives from identifying one's paradigmatic commitments. Teaching models which can act as starting points for helping learners setting out to construct mental map of the territory are likely to be most appropriate. So when introducing students to educational research, I prefer two very simple models. One of these sets out three levels (cf. Crotty's four) to think about research (philosophy, strategy and tactics), which are mapped onto paradigms, methodology and techniques (Taber, 2007, p. 33). To emphasise the 'model' status of this scheme, role metaphors are also offered for these levels (executive, manager and technician). This approach seems to work well with students just being introduced to educational research, but - as with Crotty's model - this three level characterisation needs to be seen by students as *a framework for starting to think about research*, and

not as something to be adopted wholesale to avoid thinking deeply about the nature of their research.

In the same way, when first introducing the philosophical (paradigm) level, it is important that students do not expect that a simple clear-cut typology is available. My own approach is to start by considering two educational research paradigms, but introduced in terms of several pairs of contrasted descriptors rather than given definitive labels (Taber, 2007, p. 34). This is intended to emphasise that there is no simple way of labelling the philosophical underpinnings of research in terms of a few clearly defined positions that can then be used to unproblematically classify all studies. Basing an introduction to research around two paradigms is necessarily a deficient and limited model (Roth, 2009), but it provides a very strong framework *as a starting point* for thinking about different published studies. As a teaching model it is valuable, providing that the learners do appreciate that is what it is meant to be (so once the model is set up, it is immediately critiqued so that readers appreciate it is meant as thinking tool, and not as a creed).

So as a teacher of educational research methods, I am very much concerned both with providing students with frameworks to allow them to begin to make sense of the complexity of the phenomenon, but also with an appreciation of the necessary limitations of those conceptual tools. It is with this perspective that I approached these new editions of three rather different texts designed for students learning about research.

### ***Scientific methods, measurement and educational research***

Lodico, Spaulding and Voegtle have prepared a text that seems intended primarily for the US market. Their book has a feel of a conventional textbook, and indeed it is structured much like many other US textbooks commonly found across a range of subjects. Although the authors identify graduate students as their primary audience, the book seems to have been written to be used alongside a traditional taught lecture course, rather than primarily as a resource for individual study. Chapters begin with a textbox of ‘chapter objectives’, much like a book aimed at school pupils, and I felt it was telling that one of the objectives of the first chapter is that readers should be able to “describe key aspects of the No Child Left Behind Act” (p.1).

This, as well as telling readers from most countries that ‘this book is not for you’, seemed somewhat incongruous in a research methods book, but was not actually as arbitrary as it first appeared. Lodico and colleagues point out how the US has become a context where education has adopted a major accountability agenda, something that has been considered responsible for doing a good deal of damage to the US education system, for - put simply - it places considerable stress on what can be reliably and objectively measured, rather than what might be most important (Berube, 2008). Of course, the US is not the only country in danger of spending too much time weighing the educational cow rather than nurturing it. However, Lodico and colleagues explain that the US Department of Education sets out key characteristics of what it considers ‘reliable’ research, e.g. “a study that uses the scientific method, which includes a research hypothesis, a treatment group, and a control group” (p.4). Arguably, only someone with a very limited understanding of the natural sciences, or at least confident they can assume such ignorance in their audience, can refer to ‘the’ scientific method in such definitive terms (Taber, 2009).

### **Starting from ‘the’ scientific method**

Most educational researchers, including those who use experimental designs in their work, would accept that undertaking research in education involving ‘control’ groups (in the sense often used in the natural sciences) is very difficult. To do so in ways that are both ethically acceptable, and that also effectively avoid threats to validity - such as the problems of novelty and expectancy effects - is extremely difficult. Even if such studies are ever truly possible, they are surely very rare, and adoption of this ‘gold standard’ (Phillips, 2005) would severely limit what it is possible to meaningfully research in education. Lodico, Spaulding and Voegtle themselves offer a rather more inclusive notion of scientific research in education as “the application of systematic methods and techniques that help researchers and practitioners understand and enhance the teaching and learning process” (p.10), a characterisation better aligned with the more nuanced thinking of the US National Research Council’s Committee on Scientific Principles for Educational Research (2002). Clearly education is a complex phenomenon, where identifying discrete variables that can be reliably measured is seldom straightforward. Even where this *is* possible, such variables of interest often interact in myriad ways with many other contextual factors,

which may not even be recognised, let alone possible to control. Of course, statistical approaches can be used to allow for some uncertainties. However, this is usually only going to be viable where conditions can be tested across sufficient learners/classrooms/schools to allow a ‘signal’ to be clear above all the ‘noise’ of potentially confounding factors.

Students can learn about cases where this approach is possible, but are unlikely to be able to use such a design effectively in their own studies. Yet the exultation of controlled experimental research in this fashion can too often lead to studies where the novice researcher compares a single intervention class with a single comparison, at best randomly assigning the two classes to the different condition (as seldom can individual students be randomly assigned), and hoping that pretest scores show non-significant differences. A decision then often has to be made about whether the same individual teaches both groups, or whether an enthusiast for the innovation is matched with another teacher. Designs that are intended to eliminate the ‘teacher effect’ can completely ignore how often the same teacher is either already committed to the innovation, or alternatively has been especially trained-up to use an unfamiliar approach in one class. In at least one national context, ‘experiments’ of this kind undertaken by new educational researchers seem to have been legion in recent years, whilst offering very little of value in terms of robust new knowledge.

### **Alternative philosophical frameworks**

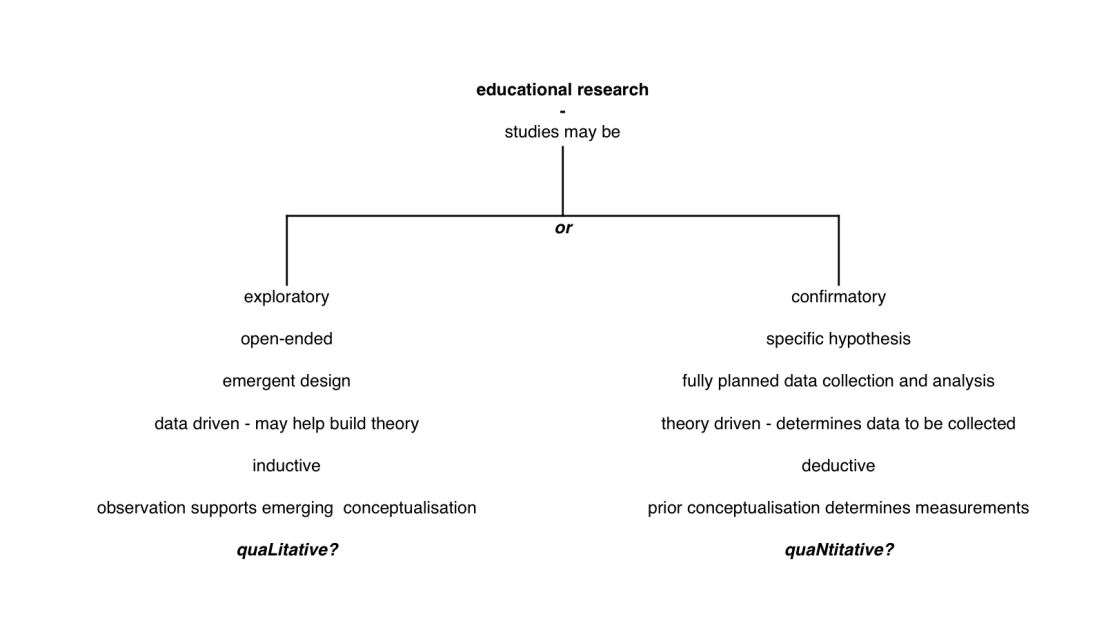
Having taken scientific method as a starting point, it makes sense that Lodico, Spaulding and Voegtle go on to consider the difference between induction and deduction. They tell readers that these two modes of thinking lead to “two general routes to knowledge in educational research” (p.11), i.e. how “inductive reasoning is most closely associated with qualitative research” and “the hypothetico-deductive method is most closely associated with quantitative research” (p.11). Thus qualitative research and quantitative research are here denoted as two main *kinds* of research. Lodico and colleagues then discuss another binary distinction, that between basic and applied approaches to research, a distinction which is often questionable in educational contexts (Taber, 2011a). They then discuss what they describe as ‘philosophical frameworks’ (pp.13), i.e.:

- Scientific realism;
- Social constructivism;
- Advocacy-liberatory framework; and
- Pragmatism

### **The quantitative-qualitative divide**

The decision to focus on the qualitative-quantitative distinction so early in the text is then reinforced in the second chapter that discusses types of educational research designs. These are organised as quantitative research approaches (descriptive survey; experimental; single subject; causal comparative; correlation research; and meta-analysis); qualitative research approaches (case study; ethnographic; phenomenological; and narrative research) and types of design that can use either or both qualitative or quantitative approaches (action research and programme evaluation). In the previous chapter qualitative research was described as that which “collects and summarizes data using primarily narrative or verbal methods” (p.11), whereas quantitative research “summarizes data using numbers” (p.11), so the text presents the main way of categorising types of research design in terms of the type of data collected. This is reiterated here, where case study is described as “one of the most common qualitative approaches” despite an acknowledgement that “some case study researchers collect both quantitative and qualitative data” (p.35).

So having started from the distinction between two modes of thinking, both of which are actually essential to any scientific research (Taber, 2011b), the authors then shift to a focus on type of data - which could seem to imply that the collection of data that is *either qualitative or quantitative* provides a top-level categorisation to think about different types of research design.



**Figure 1: two types of educational research: but is it helpful to label them quantitative and qualitative?**

Whilst there is much merit in offering students a simple dichotomous model of the main characteristics of different research studies (see figure 1), the use of the labels qualitative (often meant to imply research in an interpretive tradition) and quantitative (often meant to imply hypothesis testing using inferential statistics) in this context is potentially misleading, and is often unhelpful to students. The ‘quantitative-qualitative’ labels and distinction are of course endemic as a way of thinking and talking about educational research, but I have never been convinced that it is an especially helpful way of thinking about types of design: and I am no more convinced though reading Lodico, Spaulding and Voegtle’s treatment.

### **Educational research by numbers?**

I also found the organisation of the rest of Lodico’s text somewhat unconvincing. The next four chapters deal with Descriptive statistics (Chapter 3); Educational measurement (Chapter 4); Qualitative measures and procedures (Chapter 5) and then Qualitative research (Chapter 6). The notion of ‘qualitative measures’ struck me as something of an oxymoron, and in fact this chapter had little to do with measurement as commonly understood, despite a reference to “measurement tools...to record the subjective experiences of the researcher” (p.112). Rather it included discussion of the



use of observation and interviews, as well as talking about diagrams, maps and other images as data. So the chapter might better have been characterised as about instruments and procedures that might be used to collect qualitative data. Yet it was distinct from the following chapter, which was headed ‘Qualitative research’, which (at least in the context of *that* chapter) was “also called interpretive research or field research”. In effect there was a shift in these two chapters from a focus on methods to a consideration of methodologies: but I was left wondering what the students would make of this jumping about between levels. The notion that any kind of recording of any kind of data should be considered a measurement undertaken on some kind of scale (Springer, 2010), seems likely to be unnecessarily confusing for many learners.

The book then continued with a chapter on the “organisation and analysis of data” (Chapter 7), before discussing “Descriptive survey research” (Chapter 8) in a chapter unhelpfully subtitled “quantitative research”. The objectives for this chapter informed the reader they would be expected to be able to “outline the seven steps to carry out descriptive survey research” (p.196), and by this time I was feeling that Lodico, Spaulding and Voegtle’s approach to setting out educational research as a field was itself suffering from ‘no graduate student left behind’ syndrome, with its attempt to neatly package aspects of the subject in tidy boxes, each to be taught and learnt through a set of compact objectives: a kind of educational research by numbers.

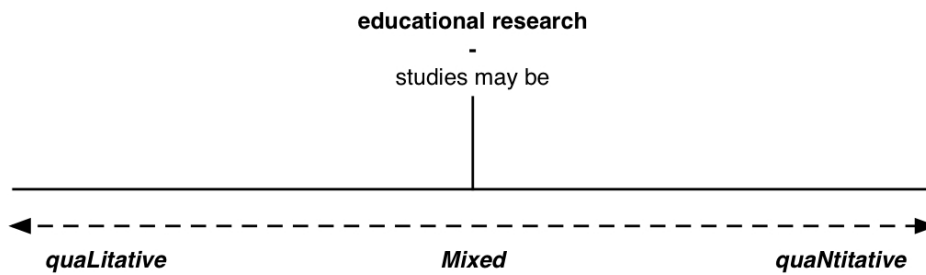
Such a criticism would not be a fair reflection of the way in which the authors discuss the detail of particular topics, but their treatment continued with discrete chapters on experimental research; non-experimental (i.e. ‘quantitative’ non-experimental) approaches; before considering inferential statistics. Then there are two chapters on the approaches which Lodico and colleagues did not attempt to squeeze into the quantitative–qualitative model (action research and programme evaluation), before ending where many educational research texts start: with chapters on identifying a research topic and producing a research proposal.

So Lodico, Spaulding and Voegtle offer a text which is in some ways quite comprehensive as an introductory text: perhaps comparable with a general text such as that of Cohen, Manion and Morrison (2011). However, its organisation and sequencing makes it less than ideal as a graduate text in the context in which I teach. Educational Research students I work with are expected to have a research area before admission to the programme, and to be developing their project throughout the course. Lectures and recommended texts are part of the resource base for an organic and holistic project development process, and are not seen as chunks of teaching material to be digested and learnt in piece-meal manner.

### ***Mixed methods as a middle path***

Although I have many reservations about Lodico, Spaulding and Voegtle's approach to introducing students to educational research, one feature of the book I appreciated was the avoidance of setting up a type of research labelled as 'mixed methods'. In contrast, Creswell has done much to popularise the notion of mixed methods (Haggerty & Postlethwaite, 2003), and his book on *Research Design* considers 'qualitative, quantitative and mixed methods approaches' (what I will refer to as the L-M-N model). The third edition of this much-appreciated text is now available. In it, Creswell offers "a framework, a process, and compositional approaches for designing qualitative, quantitative, and mixed methods research in the human and social sciences" (p.xix). Creswell then writes from a strong vision of what his message is, and therefore offers an authoritative voice that many students will appreciate. His writing is clear and this book is highly informative.

Creswell's book is structured into two main sections. The first sets out key conceptual issues and deals with such matters as selecting the type of design, the use of theory, approaches to writing, and ethics. The second section of the book looks in more detail at the process of designing the study. Throughout the section, Creswell tends to present his material, in keeping with his book subtitle, by considering separately qualitative designs, quantitative designs, and then mixed methods designs. This L-M-N model is a core aspect of the presentation, and the value of this book for a reader is likely to depend upon the extent to which they buy into this ontology of research.



**Figure 2: L...M...N: mixed methods mooted as a mid-point on a continuum of educational research**

Cresswell argues that “qualitative and quantitative approaches should not be viewed as polar opposites or dichotomies; instead, they represent different ends on a continuum...Mixed methods research resides in the middle of this continuum because it incorporates elements of both qualitative and quantitative approaches” (p.3). That is the ontological model he presents is less that shown in figure 1, and rather is reflected by figure 2. Now, as suggested above, the terms qualitative and quantitative can be ambiguous, as they carry associations that do not always relate to how the terms are used in discussing research. Students setting out to study educational research may latch on to the familiar labels and think that these two forms of research are simply studies using qualitative and quantitative data, respectively. From this perspective, a model such as figure 2, is very appealing: after all a lot of studies draw on a combination of qualitative and quantitative data, so, it may readily be inferred, they are the so-called ‘mixed methods’ studies. Yet this ignores the logic of the categories (as reflected in the other descriptors used in figure 1).

Of course Creswell does not make this error, and offers a much more nuanced description where “mixed methods research is an approach to inquiry that combines or associates both qualitative and quantitative forms. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study” (p.4). Yet, at this early point in the book, the novice reader will have limited notion of what this might mean, and why it offers important caveats to adopting the ‘mixed methods’ label for research.

Creswell goes on to consider what he sets out as the three components of a research design: philosophical worldviews, research strategies, and methods. That seems a reasonable way to set out the levels or stages of thinking that should inform research design, but having committed to the pedagogic device of the L-M-N model this model then colours all that follows to such an extent that, for Creswell, strategies of inquiry are “types of qualitative, quantitative, and mixed methods designs or models that provide specific direction for procedure in a research design” (p.11). At this point Creswell has to justify what these different strategies might be, but here the logic of the classification gets considerably strained. So whilst experimental and survey research have quantitative strategies (fair enough), and phenomenology and ethnography are considered examples of qualitative strategies (again, fine), the suggested mixed methods strategies are ‘sequential’, ‘concurrent’ and ‘transformative’ (p.12). That is, ontologically, the mixed methods strategies are quite different in nature to qualitative and quantitative strategies, and it makes little sense to partition up different strategies of enquiry in such a three-fold way.

Two of the nominated mixed methods ‘strategies’ are actually meta-strategies in that they describe research incorporating different types of research questions needing different kinds of approaches (so drawing upon strategies already categorised under quantitative or qualitative, rather than something different). So it could be better to think of research in one of these classes not as *a* mixed methods study but rather as *a sequence* of related but discrete studies within a research programme. No wonder a mixed methods project would “take extra time because of the need to collect and analyze both quantitative and qualitative data” (p.19) – if it is really more than one study. The third strategy describes where “the researcher uses a theoretical lens...as an overarching perspective within a design that contains both quantitative and qualitative data” (p.15), which we are told could be collected sequentially or concurrently. That sounded to me like it could fit a good many case studies or grounded theory studies, which according to Creswell used qualitative strategies. This all seems rather incoherent and arbitrary to this reader, and the lack of a principled foundation of the scheme seemed to outweigh any value it may have as a simple teaching model (cf. figure 2) accessible to new researchers.

## **Following the logic of mixed methods designs**

Throughout his book Creswell carefully explains different aspects of qualitative, and quantitative, and mixed-methods, designs. However, this often came across as forced. So having explained why qualitative and quantitative studies might have different types of literature review, Creswell tells us that in a mixed methods study we should “use the literature in a way that is consistent with a major type of strategy and the qualitative or quantitative approach most prevalent in the design” (p.29). This establishes a pattern, which tends to be adopted throughout the book. Creswell explains on a principled basis (and often very clearly, and informatively) why some aspect of a study is likely to be undertaken and reported quite differently according to whether the study is quantitative or qualitative. He then suggests that a mixed methods study is likely to follow one or other of these patterns, or be some hybrid.

The reader is also told that when mapping out the key literature relevant to a study, one should “include quantitative, qualitative and mixed methods studies” (p.36), which seems a rather unnecessary comment (I’ve not yet come across a student who thought they should demarcate their review in such terms), but presumably was thought important to reinforce the artificial notion that all research should be approached and conceptualised through the L-M-N ontological lens. When considering theory use in these three categories of study, we are told that “mixed methods researchers use theory either deductively (as in quantitative research) or inductively (as in qualitative research)” (p.70); and then later, when thinking about writing introductions to research reports, Creswell helpfully suggests that “a mixed methods study can employ either the qualitative or the quantitative approach (or some combination)” (p.104). The reader is left thinking that most mixed method studies are actually really qualitative or quantitative, with a side order of complementary data; or are actually composites of paired discrete studies that inform each other sequentially. At one point it is even suggested that adding a little quantitative data might make a primarily qualitative study more palatable to readers with a quantitative bent (p.212) – hardly the most principled basis for selecting a research design.

## A useful pedagogic device?

The problem I found with Creswell's approach is that different research questions, informed by different conceptualisations of the current state of knowledge about some topic, and different motivations to carry out research, often require fundamentally different approaches (cf. figure 1). Creswell certainly appreciates that, and indeed often does a good job in explaining just why this is. From this perspective it could be argued that the notion of a mixed methods study might be a *pedagogically useful* device, as it provides a context to revisit, and so reinforce, the key points made in the contexts of discussing the so-called quantitative and qualitative studies. Yet the reader is given little sense (till quite well into the book) of what a mixed methods study might actually be, other than in some sense 'between' the rather different qualitative and quantitative types.

So references to the role of mixed methods studies in seeking triangulation, for example, are somewhat unhelpful as a well designed quantitative study seeks very specific data that are analysed in a pre-determined way (and it is not clear how qualitative data helps there); and a qualitative study needs to be open to the study participants' ways of understanding - and so it is not clear how statistical testing of particular pre-planned data sets are likely to be useful in any concurrent 'mixed' methods design. Of course, a qualitative study might inform the development of categories around which quantitative data collection for statistical hypothesis testing may be planned (in a 'sequential' design), but this could just as well be seen as two discrete studies, and is not really an example of triangulation, as the use in the second study of the categories that emerged in the first means that they are assumed in (and so cannot be considered triangulated through) the subsequent study.

Another issue with Creswell's approach is that because the mixed methods category is artificial in terms of the major distinctions between so-called qualitative and quantitative research designs, he does in places seem to slip into identifying mixed *methods* with mixed *data types*. For example, his description of how a matrix might be used to "combine information from both the quantitative and qualitative data collection" (p.219) seems sensible as far as it goes, but is about counting, not about the use of inferential statistics as used in genuinely quantitative studies. Collecting data that is qualitative to be categorised in ways that support later quantitative

analysis is a well established approach (Robson, 2002) that needs to be justified in principled ways in a particular study (the state of prior knowledge and the nature of what is being researched indicate qualitative data collection is most appropriate, but the sampling and coding process support building categories that will allow meaningful quantification), a process that may be short-circuited when it is simply classed as a 'mixed' methods approach.

The danger of this book, then, is that despite much careful exposition of specifics, the interpretation a student may acquire is that 'mixed methods' is a useful label for research that allows you to justify any research design one may dream up. After all, "mixing means either that the qualitative and quantitative data are actually merged, one end of the continuum, or kept separate, the other end of the continuum, or combined in some way on the continuum" (p.230). That sounds very much like mixed methods designs are simply any that draw upon qualitative and quantitative data within the same research, and Creswell's careful attempts to offer graduations and typologies within this will be lost beneath the implicit message that mixing question types, approaches, data types, forms of analysis and so on can be sanctioned under the mixed methods flag of convenience.

I thought this book included some very useful material for research students, and dealt with many important issues well, but I would have severe concerns about recommending it as a basic text; and having read it I remain very skeptical about the merits of the mixed methods category as a principled classification of genuine merit when characterising research. Of course, there are some excellent studies that are described by their authors as mixed methods: but that is because of the quality of the thinking that has informed the design, not the choice of a fashionable label. Research students who follow Creswell's arguments carefully can learn a lot from this text, but the combination of carefully principled explication of key issues with what seems to this reader as a driven advocacy for mixed methods as a main type of research offers mixed messages. I would be concerned that many students may absorb the insidious message but miss the nuances and the qualifications, leading to projects better characterised as muddled methods than mixed methods.

## *Constructing the text of the thesis*

The authors of *'The Qualitative Dissertation'* would seem to share my skepticism over the notion of 'mixed method' (a term that "has multiple meanings, that...tend to undermine its usefulness" p.81), arguing as they do that qualitative and quantitative research "are fundamentally different and must be understood as distinctive traditions" (p.57). At first sight, Maria Piantanida and Noreen Garman's book might seem to be intended for someone much further along in the research process than the books by Creswell and Lodico and colleagues. Creswell's primary focus is research design, whereas *'The Qualitative Dissertation'* is concerned with the writing process. However, just as Creswell rightly recognises that effective research design needs to consider all stages of a research project, so Piantanida and Garman appreciate that the 'qualitative' dissertation should be understood as a process that starts early in the project.

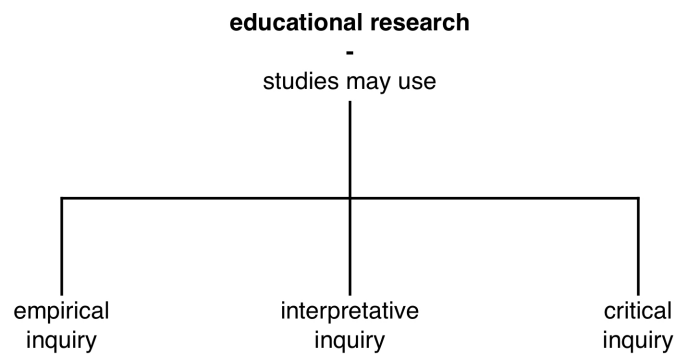
*'The Qualitative Dissertation'* has an attractive cover, perhaps reassuring for the students feeling intimidated by the writing process, and like the other books reviewed here, clear typeface supporting easy reading. This reader found parts of the book to be quite 'busy' in appearance: preferring the pages with just clear text to those interrupted by various graphic devices (framed text boxes, text boxes on a horrible grey background, and the like.) That said, the use of different voices within the book works well, and reflects parts of the message being offered – even if the publisher's graphic designers felt the need to emphasise the distinctions with clashing fonts and irritating shading behind texts. Such 'tricks' seem to insult both the intelligence and the aesthetic sense of the readers!

The authors are not to be held to blame for the graphical design of the text, but they must take responsibility for the strange decision to intersperse their writing with further reading recommendations that just comprise lists of citations (sometimes several dozen at a time) with no further guidance for the reader. This just seems lazy – what is the reader meant to make of an alphabetical list of 27 citations to texts that deal with 'criteria for judging qualitative research'; or a list of 46 (!) citations to texts that discuss ethical issues? However, this is an aberration in a volume that otherwise offers a very informative and reader-friendly approach to exploring its theme.



One feature of *The Qualitative Dissertation* that may be relevant to potential readers is that it is written very much from (and perhaps for) a US context, and assumes the structures and procedures of a doctoral programme that are common in that context. Some of these procedures (and even the terminology assumed) would be quite different elsewhere. A particular point of note was the advice that it is “impossible to predict” (p.25) how long it might take to complete a doctoral study and dissertation: in some contexts now there are expectations for the maximum registration period that bring penalties to institutions when doctoral completion is not timely. Hopefully such specifics will not deter readers outside the US, as even if working in a very different system, the research student looking to do an interpretative study is likely to benefit a great deal from reading this book. These gains will both be in terms of insights into the research process, and reassurances about the nature of the experience of producing a dissertation. The authors draw upon considerable and evolving experience in working with a diversity of research students, whose voices are included (fully acknowledged where appropriate) in the text. The book includes a set of case studies of the form of outlines of / commentaries on successful student projects. This acts as both a useful epilogue to the text, and as sources for grounding examples and observations.

This discussion of the qualitative thesis and the processes through which it is written makes it very clear that qualitative research means something other than just doing research which collects and analyses qualitative data, but rather refers to the nature of the interpretive process and “interpretative ways of knowing” (p.xviii). Piantanida and Garman refer to a paper in *Educational Researcher* (Soltis, 1984, a source which itself draws on the work of Richard J. Bernstein) suggesting the terms empirical, interpretative and critical (see Figure 3) as “a conceptual frame for distinguishing among fundamentally different philosophical approaches to educational research” (p.6). This approach certainly has the strong advantage that the labels used are less likely to become firmly associated in student minds with the analysis of qualitative or quantitative data.



**Figure 3: The Bernstein-Soltis characterisation of forms of inquiry**

Piantanida and Garman see the research process as something more than acquiring skills and a degree: rather something that acts as a catalyst for substantial self-growth. This makes particular sense when this form of research is acknowledged as having a strong subjective element, which is a key issue in understanding what is meant by different uses of the term ‘qualitative’ research. Soltis (1984, p. 6) referred to interpretative research being scientific and not eschewing “objectivity or empirical evidence”. However, for many interpretive researchers, the idiosyncratic nature of the interpretive resources that any particular analyst brings to bear in the search for intersubjectivity with study participants inevitably leads to a co-construction of a text that reflects the analyst as much as the informant. Arguably there is a tension between what might be thought of as an arts/humanities notion of interpretive research which might celebrate the creative input of the analyst, and a more ‘scientific’ notion of interpretive research where techniques are adopted (à la grounded theory) to minimise the subjective aspects of the process. The latter stance might be seen as more appropriate by those that wish to consider education as a social science.

However, it is more the former approach that is adopted here by Piantanida and Garman, who argue that as “there are no ‘findings’ waiting to be discovered”, ultimately “it is the researcher’s right and obligation to decide what major message she or he believes is important to put forward” (p.190). However, they stress the importance of rigorous data collection techniques and recommend that the interpretive analyst, like a tuning fork, should “resonate with exquisite sensitivity to the subtle vibrations of encountered experiences” (p.59). This is just one of many analogies and Keith S. Taber

metaphors included in the text, something that reflects the nature of the kind of writing they are encouraging. This particular example is a little unfortunate, however, as a tuning fork will only resonate at a few very specific frequencies – and primarily to its natural frequency to which - by its very inherent structure - it is highly tuned. In effect the tuning fork ignores most potential experience and only picks up what it has been manufactured to find. A research analyst who was like a tuning fork would only identify the very specific themes they were looking for in the data: quite the opposite of what I think was intended here.

I actually found some of the various metaphorical images used in the book rather distracting, but perhaps they will be helpful for the research student still “sloshing around in the dissertation puddle” (p.38). I also found many points to quibble with: for example, the derivation of the term triangulation does not imply needing *three* ‘angles of vision’ (the apex of a triangle can be located by taking directions from the *two* other points). Despite finding things here to disagree with, I found *The Qualitative Dissertation* an interesting and thought-provoking read. Most importantly, I can see this as being an enormous support to any new research student attempting to undertake research in a qualitative mode in an instructional or social context that retains strong vestiges of a positivist perspective on what educational research should mean and look like. As with the other books reviewed here, I would not want any student to adopt it to the exclusion of reading a wide range of texts, but I can certainly see Piantanida and Garman’s book as making a major contribution to supporting the work of those students committed to a qualitative form of educational inquiry.

## References

- Berube, C. T. (2008). *The Unfinished Quest: The plight of progressive science education in the age of standards*. Charlotte, North Carolina: Information Age Publishing.
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education* (7th ed.). London: Routledge.
- Haggerty, L., & Postlethwaite, K. (2003). Action Research: a strategy for teacher change and school development? *Oxford Review of Education*, 29(4), 423-448.

- Hammersley, M. (2004). Action research: a contradiction in terms? *Oxford Review of Education*, 30(2), 165-181.
- Hand, M. (2003). A Philosophical Objection to Faith Schools. *Theory and Research in Education*, 1(1), 89-99.
- Harrison, A. G., & Treagust, D. F. (2006). Teaching and learning with analogies: friend or foe? In P. J. Aubusson, A. G. Harrison & S. M. Ritchie (Eds.), *Metaphor and Analogy in Science Education* (pp. 11-24). Dordrecht: Springer.
- National Research Council Committee on Scientific Principles for Educational Research. (2002). *Scientific Research in Education*. Washington DC: National Academies Press.
- Phillips, D. C. (2005). The contested nature of empirical educational research (and why philosophy of education offers little help). *Journal of Philosophy of Education*, 39(4), 577-597.
- Robson, C. (2002). *Real World Research: A resource for social scientists and practitioner researchers* (2nd ed.). Malden, Massachusetts: Blackwell.
- Roth, W.-M. (2009). Beyond method: taming the qualitative-quantitative dichotomy. *Handbook of Research in North America* (Vol. 1, pp. 117-134). Rotterdam, The Netherlands: Sense Publishers.
- Soltis, J. F. (1984). On the Nature of Educational Research. *Educational Researcher*, 13(10), 5-10.
- Springer, K. (2010). *Educational Research: A contextual approach*. Hoboken, New Jersey: Wiley.
- Taber, K. S. (2007). *Classroom-based research and evidence-based practice: a guide for teachers*. London: Sage.
- Taber, K. S. (2009). 'Scientific' research in education. In K. S. Taber (Ed.), *Progressing Science Education: Constructing the scientific research programme into the contingent nature of learning science* (pp. 51-78). Dordrecht: Springer.
- Taber, K. S. (2011a). Ken Springer: Educational Research: A Contextual Approach. *Science & Education*, 1-13.
- Taber, K. S. (2011b). The natures of scientific thinking: creativity as the handmaiden to logic in the development of public and personal knowledge. In M. S. Khine (Ed.), *Advances in the Nature of Science Research - Concepts and Methodologies* (pp. 51-74). Dordrecht: Springer.