Learning about Research Methods: A case study

Louise Gascoine, Laura Mazzoli-Smith

Abstract

This chapter focusses on the pedagogy of teaching a research methods module in an undergraduate education studies programme. It presents a case study of a module that has been designed and taught with student-centred pedagogy in mind, underpinned by meaningful exploration of constructivist learning. This case study illustrates how this has been achieved by scaffolding key concepts and facilitating an understanding of content within a wider pragmatist orientation to knowledge and truth. The examples given demonstrate how pragmatism is ideally suited to supporting student understanding of research methods. The chapter draws on material from the module, and reflects on pedagogy, assessment, and student learning. This chapter aims to prompt readers to reflect on their own experiences of learning research methods, including in the development of their own research ideas, and to support their ongoing studies in this area.

Summary Points

- A practical exploration of teaching and learning on a research methods module in an education studies undergraduate programme.
- An opportunity for students to reflect on their own research methods journeys, in response to prompts from experiences of both teaching and learning in this case study.
- Meeting the challenge of translating constructivist teaching principles to an approach to research methods that has a strong theoretical underpinning, alongside practice-based relevance and a strong experiential component.

Introduction

This case study is grounded in the practicalities of teaching a research methods module in an undergraduate education studies programme. In this chapter, we will illustrate, with examples from practice, how we have sought to orientate students to research methods

through student-centred pedagogy and inquiry. This is an orientation that is grounded in opportunities to explore research methods through constructivist learning where there is a focus on student ownership of their own learning and development. Considering best practice in higher education, McCabe and O'Connor (2014: 355) described 'constructivist, active teaching strategies' as being an effective vehicle for student-centred learning. In our experience, there is often well-intentioned reference to constructivist teaching principles, but translating these into practice-based, experiential learning opportunities is not always straightforward. We would suggest the complexity of constructivist learning principles is heightened further in the teaching of research methods.

In teaching research methods to education studies students, we have come up against the perception that this is both a hard area to engage in and lacks some of the interest of other more topic-led modules. With this in mind, in this chapter we will describe out some of the constructivist activities that we have incorporated into this module, taught and developed over a number of years and in tandem with increased positive student engagement. A focus on the Deweyan orientation of 'closeness to life' as being integral for learning (Cremin, 1959: 163), fits well with our orientation to teaching research methods.

The chapter speaks to our own journeys in teaching research methods, and to our experiences of engaging with students on their research methods journeys in education studies. The metaphor of a journey reflects the often-winding paths that students weave in research methods learning, as they are encouraged to explore, reflect and be reflexive. It is interesting to draw attention to the use of metaphor at this point, a technique that we value as a means of encouraging student reflection to aid their own meaning-making about research methods. (See Alvesson and Sandberg, 2021 for a detailed exploration of metaphor.) Transformative learning theory gives an account of how disorienting dilemmas can promote learning through reflection on taken-for-granted assumptions (Mezirow, 2018). Considering these assumptions, the journey is a particularly salient metaphor to encourage thinking about:

- Student's own experiential position(s) in relation to the epistemic challenges of understanding educational research methods, and

- The different paths (and iterative process of the journey) where students move from a research idea and question to the summative submission of a research proposal.

Questions to consider

What do I understand about the research I am seeing and reading about?

What are my 'growing edges' (or areas for development) for my understanding of research methods?

What examples of disorienting dilemmas can I draw on to note moments of change or transformation in relation to my understanding? (See the example of *The Spirit Level* below.)

The approach to the design and teaching of the research methods module detailed in this case study, is one that actively encourages engagement in depth with research methods and their underpinnings. Acutely aware of the value of this deep learning (Entwistle 2013) for students, we encourage readers to reflect on their own experiences of learning research methods to support and develop their learning in this area.

What follow in this chapter are three examples of aspects of this module designed to foster the above; the example of *The Spirit Level* (Wilkinson and Pickett, 2009) as a seminal case study, the development of a research idea, and thinking inclusively about positionality in relation to research methods.

The Spirit Level – A seminal case

We use the example of *The Spirit Level* (Wilkinson and Pickett, 2009) to highlight to students the way in which understanding research methods empowers them to engage with, and understand, highly influential research such as this on social inequalities and health. Wilkinson and Pickett's epidemiological study into health and income inequality within societies carries an empirical, but also an evaluative, message that has been taken up by political parties of many persuasions. Their argument, which to many is self-evident precisely because of the 'killer graphs' that appear to lead to an incontrovertible conclusion, is that countries with higher levels of income inequality fare worse on a range of health and social outcomes than more equal countries. However, a lengthy critique (Saunders and Evans, 2011) mounts an attack on a series of methodological grounds which necessitates, and thereby fosters, a deep engagement with the material as students are invested in the

overall message about equality. The value of this kind of example is that it demonstrates the real-world stakes of understanding research methods, and it is also an influential practical case wherein values and methods intersect. We have found that this particular case can function as a 'disorienting dilemma' for students, in the sense of promoting transformative learning by prompting a reflection on taken-for-granted assumptions. Assumptions that we find they often bring with them at the beginning of their research methods journey.

Questions to consider

Thinking about the example of 'The Spirit Level', what examples of disorienting dilemmas can you draw on to note moments of change or transformation in relation to my understanding?

What research have you come across that has made you reconsider your own values or views?

Has there been an occasion when understanding the technicalities of how research has been undertaken has led me to question its quality or value?

Developing a research idea

Opportunity is given, in summative assessment, for students to develop their own research idea which they submit as a research proposal. We provide a structure for students to present their research proposal that is not dissimilar to the kind of information that would be expected by research funders (rationale and aim(s), research question(s), research design and methods, strengths and limitations, and ethical considerations). The research proposal format facilitates this summative assignment as authentic (Villarroel *et al*., 2018) with the benefits that follow in terms of experiential and constructivist learning.

The importance of situating knowledge, as students develop their own research ideas in a wider, pragmatist orientation to knowledge and truth, is key. A reflexive and iterative process is modelled - we remind students that no two journeys are the same, and that they are a situated part of their planned research as much as any participants might be. Often (and not just at the beginning of developing research ideas) the question 'what is your research question*?'* is posed, encouraging students to make connections and consider why they make them in a process of relating 'judgements and decisions [that they make] to the

question' (Biesta, 2020: 23). Identifying a research question and bringing to light your own understanding about why you pose the question (a question of both positionality and context) are the first part of the journey – the foundations.

If the foundations of research are not clear, then it is likely that what grows from them won't be. This notion of clear foundations speaks also to the importance of defining key terms in writing about research methods and beyond. The example of metacognition (or 'thinking about thinking') (e.g., Flavell, 1979) is a useful way to illustrate this. Desoete (2008: 204) described it as 'How you test is what you get' in relation to assessing metacognitive skills. We draw a parallel here to the research question(s) you ask (including where they come from and your position in relation to them) and how they then influence the research that you do, and the findings that you get.

Drawing on another of Alvesson and Sandberg's (2021: 97) metaphors, this process of students designing their own research idea is something of a 'dance routine', as students are encouraged to move in and out of contact with their ideas, being reflexive (looking inward, considering one's own views, beliefs, and judgements) about their process of arriving at them. Small group seminar sessions are used, and a kind of research proposal 'speed dating' is set up – students each have five minutes to present their idea and pose any questions they have, then peers and tutors give feedback and ask questions. The ensuing discussion is always so fascinating, the back and forth simultaneously challenging and inspiring, and the development in quality and clarity of student thinking clear.

> **Questions to consider**
>
> Set up your own research idea 'speed dating' - take it in turns in a small group to present your research idea. Wait until each researcher has presented before having a discussion and think about these questions:
> Is it clear where the research question comes from?
> Why it is an important question to ask? Who is the research important for and why?
> Where is the researcher in the research?

Thinking inclusively about positionality

The research proposal assignment is preceded by a summative essay, allowing students to first explore at depth, an issue of current importance in educational research. This essay based individual exploration is grounded in learning about broader philosophical and theoretical debates in educational research, fundamental to the development of students' own research ideas later in the module.

We do not avoid challenging debates that are truly inescapable in research methods teaching; we directly explore complex issues including, but not limited to, philosophical and ontological debates and issues around evidence and practice in education. Enabling students to engage with challenging, abstract ontological and epistemological material is brought to life through tangible examples that we use, often directly related to the context we teach in or world around them. We present a schematised overview of research paradigms in multiple visual ways, talking through with students what the adoption of each framework means in practice, but also drawing on American pragmatism and the work of Dewey (Hickman and Alexander, 1998) to demonstrate how multiple positions can be possible to build a better – not necessarily the best or only – version of the world.

Questions to consider

What kinds of knowledge do you have of the room you are in and the things that are in it as you read this chapter?
How do you know this?
In what ways might you approach finding out about how you know things?

Thinking inclusively about research design and methods, is something that students have valued for its drive to encourage thinking 'laterally' and being 'dynamic' and 'open to possibilities', as opposed to more fixed views of research methods that students may have encountered before. Veck and Hall (2020) encourage an approach that considers the question of inclusion (who, how and why?) and relationship, by drawing on the work of Martin Buber (1878–1965), particularly '*I and Thou*' (Buber, 2004). Veck and Hall's (2020) challenge to the reader is to consider things like the difference between 'encounter' and 'meeting' in research, as well as research methods and procedures. Students reflexively

embraced this way of thinking about research in terms of relationships, their own position and considering what inclusive research means in relation to all aspects of research.

Recommended reading

Schön, D. A. (1992) The Theory of Inquiry: Dewey's Legacy to Education. *Curriculum Enquiry*, 22(2), pp. 119-139. https://doi.org/10.1080/03626784.1992.11076093

Donald Schön explores the legacy of Dewey for Education, the metaphor of the 'swamp' in relation to dilemmas in educational research around relevance and rigor is a useful way of thinking about and being reflexive about your own positionality. Schön's conceptualisations of reflection and knowing are a particularly useful way to think about practice based and experiential learning in relation to research methods.

Biesta, G., Filippakou, O., Wainwright, E. and Aldridge, D. (2019) Why educational research should not just solve problems, but should cause them as well. *British Educational Research Journal*, 45(1), pp.1-4. https://doi.org/10.1002/berj.3509

Biesta *et al*. (2019) explore, in a short editorial piece, some interesting debates around the value of educational research as a vessel to not only solve problems, but also identify and cause problems. In the context of this case study, this speaks to our active encouragement of students to think and be reflexive about what they know, why and what this means in the context of research methods.

Pring, R. (2004) *The Philosophy of Education*. London: Bloomsbury Publishing.

Pring's *The Philosophy of Education* (2004) is one of the most readable, clear and helpful expositions of philosophical ideas that underpin methodology we have come across. In a short book drawing on real-world examples (including a very memorable idea about social constructionists and aircraft design!), Pring provides an accessible way into the big philosophy of social science ideas that underpin educational research methods.

References

Alvesson, M. and Sandberg, J. (2021) *Re-imagining the research process: Conventional and alternative metaphors*. London: Sage.

Biesta, G., Filippakou, O., Wainwright, E. and Aldridge, D. (2019) Why educational research should not just solve problems, but should cause them as well. *British Educational Research Journal*, 45(1), pp. 1-4. https://doi.org/10.1002/berj.3509

Biesta, G. (2020) *Educational research: an unorthodox introduction*. London: Bloomsbury Publishing.

Buber, M. (2004) *I and Thou.* London: Continuum.

Cremin, L. A. (1959) John Dewey and the Progressive-Education Movement, 1915-1952. *The School Review,* **67**(2), pp. 160-173. https://doi.org/10.1086/442489

Desoete, A. (2008) Multi-method assessment of metacognitive skills in elementary school children: How you test is what you get. *Metacognition and Learning,* **3**(3), pp. 189-206. https://doi.org/10.1007/s11409-008-9026-0

Entwistle, N. J., and Smith, C. (2013) Exploring the nature of academic understanding. *The Psychology of Education Review*, **37**(1), pp. 28-36.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: a new area of cognitive — developmental inquiry. *American Psychologist,* **34**(10), pp. 906-911. https://doi.org/10.1037/0003-066X.34.10.906

Hickman, L. A., and Alexander, T. M. (Eds.) (1998). *The Essential Dewey: pragmatism, education, democracy* (Vol. 1). Bloomington and Indianapolis: Indiana University Press.

McCabe, A. and O'Connor, U. (2014) Student-centred learning: The role and responsibility of the lecturer. *Teaching in Higher Education,* **19**(4), pp. 350-359. https://doi.org/10.1080/13562517.2013.860111

Mezirow, J. (2018) Transformative learning theory. In K. Illeris (Ed.) *Contemporary Theories of Learning: Learning theorists…in their own words*.Abingdon: Routledge.

Pring, R. (2004). *The Philosophy of Education*. London: Bloomsbury Publishing.

Saunders, P. and Evans, N. E. (2011) *Beware False Prophets: Equality, the Good Society and The Spirit Level*. London: Policy Exchange. Available at: https://www.policyexchange.org.uk/wp-content/uploads/2016/09/beware-false-prophets-jul-10.pdf (Accessed 11 May 2022).

Schön, D. A. (1992) The Theory of Inquiry: Dewey's legacy to education. *Curriculum Enquiry*, 22(2), pp. 119-139. https://doi.org/10.1080/03626784.1992.11076093

Veck, W. and Hall, M. (2020) Inclusive research in education: Dialogue, relations and methods. *International Journal of Inclusive Education,* **24**(10), pp. 1081-1096. https://doi.org/10.1080/13603116.2018.1512659

Villarroel, V., Bloxham, S., Bruna, D., Bruna, C. and Herrera-Seda, C. (2018) Authentic assessment: Creating a blueprint for course design. *Assessment and Evaluation in Higher Education*, **43**(5), pp. 840-854. https://doi.org/10.1080/02602938.2017.1412396

Wilkinson, R. and Pickett, K. (2009) *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin UK.