Learning as Researchers and Teachers: The Development of a Pedagogical Culture for Social Science Research Methods?

Daniel Kilburn[a], Melanie Nind[a] & Rose Wiles[a]

[a] University of Southampton
Published online: 26 Jun 2014.

PLEASE SCROLL DOWN FOR ARTICLE

Routledge
Taylor & Francis Group

LEARNING AS RESEARCHERS AND TEACHERS: THE DEVELOPMENT OF A PEDAGOGICAL CULTURE FOR SOCIAL SCIENCE RESEARCH METHODS?

by DANIEL KILBURN, MELANIE NIND and ROSE WILES, *University of Southampton*

ABSTRACT: *In light of calls to improve the capacity for social science research within UK higher education, this article explores the possibilities for an emerging pedagogy for research methods. A lack of pedagogical culture in this field has been identified by previous studies. In response, we examine pedagogical literature surrounding approaches for teaching and learning research methods that are evident in recent peer-reviewed literature. Deep reading of this literature (as opposed to systematic review) identifies different but generally complementary ways in which teachers of methods seek to elucidate aspects of the research process, provide hands-on experience and facilitate critical reflection. At a time when the advancement of research capacity is gaining prominence, both in the academy and in reference to the wider knowledge economy, this paper illustrates how teachers of methods are considering pedagogical questions and seeks to further stimulate debates in this area.*

Keywords: *social science research methods education, research capacity, pedagogic culture, student-centred learning*

1. INTRODUCTION

Social research methods are taught at all levels of higher education and across a wide range of disciplinary, institutional and national contexts. As well as constituting the tools of the trade for empirical social science, the capacity to engage with and undertake research is increasingly referred to in policy rhetoric on the academic knowledge economy. This capacity demands a combination of theoretical understanding, procedural knowledge and mastery of a range of practical skills. The teaching and learning of research therefore poses significant challenges. Yet despite the teaching of research techniques and methodologies across most social science programmes, including education, this teaching has arguably occupied a marginal position in the concerns of university faculty and students alike. While there is a growing range of published resources on teaching and learning of research methods, particularly textbooks and web resources, recent surveys of the literature suggest that research on this topic remains limited in its

http://dx.doi.org/10.1080/00071005.2014.918576
http://www.tandfonline.com

scope to inform teaching practice (Earley, 2014; Wagner *et al*., 2011). Writing from the perspective of methods teachers and researchers involved with a national programme to advance capacity in social science research methods in the United Kingdom, we explore what insights we may glean into how methods teachers approach their craft from an emerging pedagogical literature on both qualitative and quantitative research methods.

A recent systematic review of a decade's worth of academic literature since 1997 identified a lack of 'pedagogical culture' in the form of debate, investigation and evaluation concerning how research methods are taught and learnt (Wagner *et al*., 2011). The scope of most publications was found to be confined to narrow disciplinary or methodological boundaries, with little dialogue around overarching concerns and a lack of research-based insights. This review's authors therefore concluded that the literature offered little guidance for current or prospective methods teachers. An even more extensive synthesis of the research in this field painted a similar picture of a literature based largely on insights from particular instructors, courses or institutions (Earley, 2014). Despite identifying common themes surrounding learners' characteristics, course content and teaching approaches, this review concluded that the literature contributes little on how students actually learn research methods. As a result, methods teachers are left to 'rely on a network of peers, scattered research literature, and much trial-and-error' for developing their practice (Earley, 2014, p. 2). This paper responds to the conclusions of these reviews by seeking to appraise what, if anything, we can glean about the pedagogy surrounding research methods from the contemporary research literature. We recognise that there are research methods textbooks with their own implicit pedagogical assumptions, but as these are not explicitly positioned as guidance for methods teachers and do not claim a basis in pedagogical research we confine our review to papers on the teaching of research published in peer-reviewed journals and conference proceedings.

This article deploys a different approach from the systematic review literature in this field, by presenting a thematic qualitative exploration of the literature since 2007 (when Wagner *et al*. [2011] concluded their decade-long review). As predominantly qualitative researchers, we maintain that a close reading of the reviewed literature can provide richer insights than those derived in the syntheses to date. We have included 24 published papers that focus on *how* teachers seek to facilitate the learning of research skills and capacities amongst undergraduate, postgraduate and early-career learners in a range of contexts. The focus of this research is on formal teaching and instructional activities, rather than on self-directed learning from methods texts or other resources. We begin by introducing the context and challenges facing the teaching of research methods in the United Kingdom and internationally. Following a brief outline of our methodological approach, we then present the findings of our analysis of the literature and explore the various student-centred approaches that published papers indicate teachers are adopting in response to the challenges of teaching research. We conclude this new pedagogical overview by discussing the implications of what

we argue is an emerging pedagogical dialogue articulated in the body of journal publications on the teaching and learning of social science research methods.

2. FROM POLICY TO PEDAGOGY

The British Academy (2013, p. 10), writing on behalf of the UK's major scientific research funders, recently warned that as 'research becomes an ever more global enterprise, the UK cannot afford to be complacent about its reputation as world leader'. Equipping learners with the skills to undertake high-level research is essential to meeting these challenges, yet – as the rhetoric continues – there is a continued risk that deficits in research capacity will manifest themselves at all levels of higher education. MacInnes (2012) argues that undergraduates may lack the level of 'literacy' required to understand the results of commonly used techniques for analysing data. Equally, argue Savage and Burrows (2007), taught postgraduate or research students may lack sufficiently broad knowledge to critically engage with research based on methodologies they do not use themselves. Even amongst those at more advanced stages of academic career, there is a recognised need to build on foundational methods training to develop the advanced research skills required to navigate a changing landscape of research opportunities and demands (Moley et al., 2013). Equipping individuals with the skills required to keep abreast of an increasingly competitive global knowledge economy for social research appears as an increasing priority for UK research funders, as reflected in initiatives by the Economic and Social Research Council, the Nuffield Foundation, the British Academy and the Higher Education Academy.

Concerns regarding the relationships between higher education, methodological training and research capacity are not confined to the United Kingdom. Across the Atlantic, anxieties regarding the potential of doctoral graduates to contribute towards research-led knowledge economies are creating 'a shift from a hitherto almost exclusive focus on *research* to one of *training*' (Boud and Lee, 2008, p. 20; emphasis added). Debates surrounding research capacity in US social sciences include explicit reference to the need to prioritise advanced quantitative training in response to the challenge of so-called *big data* (National Science Foundation, 2011). Similarly, the European Union's higher education reforms position advanced research capacity, especially in the context of doctoral training, as key for both the economic and social development of Member States (Kottmann, 2011). In Australia, the opportunity for undergraduates to undertake a research project as part of an additional year of 'honours' study has been identified as a means of 'fast tracking' graduates into research careers (Shaw et al., 2011). More broadly, the notion of an 'undergraduate research experience' is now well-established in the science and technology disciplines (where in the United States it takes the form of research-intensive summer schools or internships). Efforts to mobilise teaching and training in order

to build researchers' capacity in response to perceived changes in the demands of a 'research economy' therefore extend beyond UK social science.

Whatever position one takes on the current rhetoric, the challenges facing efforts to develop methodological skills within higher education are wide-ranging and inescapable. Learner qualities and motivations play a part; with few undergraduate students actively seeking careers in academia, many arguably see little value in learning skills perceived as relevant only to their discipline of study (Preissle and Roulston, 2009). Additional challenges arise in the form of anxiety or aversion towards quantitative methods (Baloglu and Zelhart, 2003). In the United Kingdom, this problem arguably begins earlier in the educational life course, with fewer than one-quarter of those students applying for social science degrees having studied mathematics beyond the age of 16 (MacInnes, 2012). Some students therefore view components of their methodological learning as contingent on mathematical tasks for which they feel ill-prepared (Williams *et al.*, 2008). Another threat to students' motivation stems from so-called credentialism, because success on a degree course is rarely contingent on good grades from a methods component. Lastly, student diversity poses additional pedagogical challenges, for example, of culturally diverse conceptions of what constitutes research, or varied levels of confidence and competence among students learning in a second or third language (Galliers and Huang, 2012).

The circumstances outlined above bring challenges to the formal teaching and learning of research methods beyond those arising from the characteristics of the subject matter, which poses its own issues. As Hammersley argues:

> The task of teaching research methods […] is not the transmission of a body of knowledge, or the drilling of students in the use of techniques, but rather a matter of helping them to build up relevant knowledge and capabilities, and to develop the necessary intellectual virtues. (2012, p. 2)

This requires a balance between theoretical knowledge and practical skills. However, a recent survey of US graduate students found that the majority of teaching was delivered through 'traditional' instructional techniques that 'relegate the student to a non-participant status' (Strayhorn, 2009, p. 120). UK observers have expressed similar concerns that methods learning predominantly involves 'mastering a limited range of technical skills largely divorced from the context in which those skills may be applied' (MacInnes, 2012, p. 2). This issue reflects the (metaphorical) tension between acquisition and participation (Sfard, 1998). While lecture and class-based teaching remains important for providing insights into the theoretical and technical aspects of research practice, over-reliance on knowledge transmission presents 'an idealised and misleading picture of the research process, […] which ignores the messy and uncertain reality' (Hammersley, 2012, p. 3). Providing learners at all stages of their academic careers with a practical understanding of a diverse range of methodological approaches together with knowledge of their epistemological foundations presents considerable pedagogical challenges. Next, we discuss three perspectives on how teachers are responding

to these challenges identified from our analysis of the emerging research literature on the teaching and learning of research methods.

3. METHODOLOGICAL APPROACH

To elucidate the nature of emerging research-informed pedagogical knowledge in the teaching of research methods, we undertook a comprehensive qualitative review of publications since 2007 (when Wagner *et al.* [2011] concluded their decade-long review). We sought to identify all peer-reviewed outputs on the teaching and learning of social research methods from 2007 to 2013 (including peer-reviewed conference proceedings and edited book chapters). Searching primarily involved the ISI Web of Knowledge bibliographic database due to its broad coverage and facility to tailor the search to the social sciences. The following terms were incorporated into a 'high sensitivity' search (Barnett-Page and Thomas, 2009): ("research methods" OR methodology OR qualitative OR quantitative OR "mixed methods") AND (teaching OR learning OR education OR training OR "capacity building").

Over 800 titles were identified and hand searched to identify those which focused on the teaching of research methods specifically. The bibliographies and lists of received citations of relevant papers identified through the ISI search were also cross-referenced to identify additional relevant publications. From this process we identified a pool of 66 publications relating to the teaching of research methods. A number of these sources were then excluded because they did not offer insights into how methods were taught – the gap in the literature identified by Earley (2014) – and focused instead on topics such as learner attributes. The majority of the outputs selected comprised teachers' reflections on their own practice, which while limited in research terms nevertheless say something about knowledge in this field that is being authoritatively articulated.

This process resulted in 24 papers being selected for further exploration/analysis (see Table 1). A broad conception of social science was taken, which included disciplines beyond the traditional confines of social science but in which social research methods are being taught. These papers reflected a balance between the teaching of qualitative and quantitative methods (although none discussed mixed methods), with some focusing on the broader principles of research design. There was also a balance between sources focusing on undergraduate and taught post-graduate learners; only two sources focused on doctoral learning, which does not adequately represent the significance of methodological training in many postgraduate research programmes. Perhaps the most notable feature of this literature is its focus on North American contexts, suggesting that teachers of research from other countries, including the United Kingdom, have been less forthcoming in publishing research or reflections on the teaching of research.

A close reading of these sources was undertaken to garner insights into how methods teaching was conceived of, enacted and reflected upon by practitioners. This was more in keeping with academic reading traditions of thematic analysis

TABLE 1: Sources included in the qualitative review

Reference	Country	Discipline	Learners	Methods taught
Adeney and Carey (2009)	United Kingdom	Politics	Undergraduate	Quantitative
Aguado (2009)	USA	Politics	Undergraduate	Quantitative
Burkley and Burkley (2009)	USA	Psychology	Undergraduate	Quantitative
Camille Peres et al. (2010)	USA	Statistics	Undergraduate	Quantitative
Carifio and Erikson (2007)	USA	Business Studies	Undergraduate	Quantitative
Cox (2012)	USA	Education	Master's	Qualitative
DeLyser (2008)	USA	Geography	Master's	Qualitative
DeLyser et al. (2012)	USA	Geography	Master's	Qualitative
Dinauer (2012)	USA	Business Studies	Master's	Quantitative
Dousay et al. (2012)	USA	Education	Doctoral	Research in general
Eisenhart and Jurow (2011)	International	Information Systems	Doctoral	Qualitative
Galliers and Huang (2012)	International	Business Studies	All	Qualitative
Gönül and Solano (2013)	Canada	Sociology	All	Quantitative
Hsiung (2008)	USA	Geography	Master's	Qualitative
Keenan and Fontaine (2012)	United Kingdom	Politics	Undergraduate	Both
Leston-Bandeira (2013)	USA	Education	Undergraduate	Both
Roth (2009)	United Kingdom	Politics	Master's	Qualitative
Ryan et al. (2014)	USA	Theatre Studies	Undergraduate	Both
Saldaña (2009)	South Africa	Education	Master's	Qualitative
Schulze (2009)	Australia	All	Master's	Research in general
Shaw et al. (2011)	USA	Public Affairs	Undergraduate	Research in general
Smith and Martínez-Moyano (2012)	USA	Geography	Master's	Quantitative
Thien (2009)	Canada	Geography	Research practitioners	Qualitative
Waite (2011)	USA	Education	Master's	Qualitative

than with the often-criticised, mechanistic mapping, key-wording and data extraction associated with systematic review (Nind, 2006). Hence our analysis was based on rigorous, qualitative reading of the texts rather than systematic categorisation of their content. This sort of qualitative reviewing presents inherent challenges of extrapolating from narratives presented in different ways and with varying degrees of detail (Wiles *et al.*, 2011). Whilst all efforts were made to faithfully represent the authors' perspective, our analysis is invariably subject to a degree of interpretation and inference such that the ideas presented below should be taken as our own. We reflect further on the implications of the potential limitations of this method in the discussion.

4. FINDINGS: APPROACHES TO TEACHING AND LEARNING

Approaches to teaching and learning were discussed across the 24 papers, in terms of: the challenges associated with particular methods (and/or methods in general); practical responses to these challenges in the design and delivery of methods teaching; and in some cases, the influence of particular theories or perspectives on learning. More broadly, our analysis suggested that the teaching approaches discussed in the literature mirrored three complementary and inter-related pedagogical goals: the first goal sought to make the research process visible by actively engaging students in the aspects of the methods at hand; the second sought to facilitate learning through the experience of conducting research; and the third sought to encourage critical reflection on research practice.

Making Research Visible

Approaches to teaching and learning research generally share the aim of 'making the research process visible' by grounding learners' understanding of otherwise abstract principles or concepts (Keenan and Fontaine, 2012, p. 228). Facilitating 'active learning' was discussed in the literature as one response to this aim. Active learning is broadly defined as 'any teaching method which gets students actively involved', as opposed to instructional approaches that rely on didactic modes of knowledge transmission (Keyser, 2000, p. 35). This may take the form of engaging students in practical or problem-based tasks in which they are encouraged to practice, experiment and engage with the topic. Active learning can be construed as a theory in that it has 'evolved certain principles about the nature of teaching and learning', although it is more widely used as a means of categorising teaching approaches that emphasise student-centred learning (Kane, 2004, p. 276). While the language of 'active learning' was only used in some of the papers we reviewed (Dousay *et al.*, 2012; Keenan and Fontaine, 2012; Camille Peres *et al.*, 2010; Leston-Bandeira, 2013), there was a broad consensus around the need to balance knowledge transmission with the use of exercises or examples which help to illustrate aspects of the research process for both qualitative and quantitative methods.

In the teaching of quantitative analysis, the use of exercises designed to actively engage students constitute nigh on a pedagogical orthodoxy. Examples in the literature range from interactive simulations of statistical concepts (Camille Peres *et al.*, 2010), to exercises in which outputs from quantitative research are critically appraised (Schulze, 2009) or to sessions in which students undertake analyses of practice datasets using relevant software packages (Smith and Martinez-Moyano, 2012). The use of examples, metaphors or vignettes to communicate concepts or approaches is discussed as one way of engaging learners in lecture-based teaching of quantitative research (Carifio and Erikson, 2007). Computer-based demonstrations or live simulations offer a more sophisticated means of illustrating abstract statistical concepts and 'bringing them alive' in the classroom (Smith and Martinez-Moyano, 2012, p. 123). Hands-on exercises can then be used to engage learners in different approaches, helping to develop intuitive understanding of the underlying concepts and build confidence in the processes involved (Camille Peres *et al.*, 2010). However, the literature also revealed some debate over how best to deploy these techniques (beyond what may seem more obvious to most teachers). Some advocate a query-first approach, in which enquiry-based learning takes place before (or as part of) the explanation of foundational concepts (Camille Peres *et al.*, 2010), where others emphasise the need to always provide students with prior conceptual explanations (Smith and Martinez-Moyano, 2012).

Teachers of qualitative methods also use active learning as a means of making the research process visible. In one instance, scenes from feature films were used to demonstrate epistemological, methodological and procedural aspects of qualitative research that would otherwise have relied on didactic instruction (Saldaña, 2009). A similar example, albeit not tailored solely to qualitative research, deployed clips from the *Mythbusters* documentary series to illustrate principles of research inquiry (Burkley and Burkley, 2009). In another case, audio 'podcasts' were produced – in the form of recorded interviews in which academics discussed their own methodological approaches – which then formed the basis of critical evaluation assignments undertaken by students (Ryan *et al.*, 2014). While these examples relate to the teaching of general research principles, one author also discusses a hands-on exercise that made inventive use of playing cards to allow students to specifically explore the multiple ways in which qualitative data might be coded (Waite, 2011). Exercises such as these appear to offer pedagogic potential for developing learners' skills and confidence. However, questions have been raised as to how far examples that simulate aspects of the research process adequately reflect real data or real-world social scientific contexts (Hammersley, 2012). More established approaches, such as group discussions, were also cited as affording students equally valuable opportunities for iteration, collective reinforcement and feedback from peers and instructors (Keenan and Fontaine, 2012). As one teacher of qualitative methods also reminds us, 'an emphasis on methods and techniques cannot replace a simultaneous understanding of methodologies, epistemologies and theoretical

foundations' – suggesting an important and complementary role for lectures, reading and written assignments (DeLyser, 2008, p. 235).

Active learning using online resources is also increasingly evident, particularly for quantitative methods (Tishkovskaya and Lancaster, 2012). Web-based resources are often utilised to complement classroom-based learning, and virtual learning environments offer opportunities for student engagement. In the case of one undergraduate methods course, a discussion forum hosted on a virtual learning environment elicited 227 comments from students just on the topic of devising research questions (Leston-Bandeira, 2013). Web-based tutorials, collaborative wikis (in which students co-create content) and instructional videos are also used to complement face-to-face learning, albeit with the caveat that such content should be critically evaluated as part of the course design process (Gönül and Solano, 2013). In addition to blended forms of web-based and face-to-face learning, the teaching of research methods on entirely online courses may also make use of exercises designed to facilitate active learning; for instance, in the form of online discussions or problem-solving activities (Schulze, 2009). Regardless of the quality of the pedagogy, observers also warn of the challenges posed by online learning, including that students may miss the camaraderie of the classroom and struggle with reduced opportunities for face-to-face contact with teachers (Dinauer, 2012; Moley et al., 2013).

The use of exercises and techniques that help to make the research processes visible therefore appears integral to ensuring that 'a student-centred approach to learning thrives' (Keenan and Fontaine, 2012, p. 226). The decision to teach methods through student-centred approaches appears as an intuitive response to teachers' knowledge of how their students learn particular methods and are deployed as part of a range of instructional strategies. However, this may require an additional investment of time. As Keenan and Fontaine (2012, p. 233) conclude, 'if research methods are to be taught as an active and engaged process' then 'the timeframe within which students are expected to complete their work must be expanded'. The potential rewards may include opportunities for successive trial and error, exploration and discovery, and continuous real-time feedback, which arguably are key to avoiding anxiety and engaging students with the methods at hand (Gönül and Solano, 2013).

Learning by Doing Research

Providing students with first-hand experience of undertaking research in real-world contexts or using authentic empirical data constituted a second and related pedagogical approach within the literature. A number of the articles we reviewed advocate the value of 'learning by doing' (Aguado, 2009; DeLyser, 2008) or 'experiential learning' in this regard (Galliers and Huang, 2012). Experiential learning has its theoretical antecedents in constructivist philosophies that emphasise 'the central role that experience plays in the learning process' (Kolb, 1984, p. 20). In most respects, such experience is seen as a complementary component

of teaching within classroom contexts. Some teachers nonetheless argue that the tacit knowledge associated with certain aspects of research practice cannot be taught in abstraction (Hammersley, 2012), which poses additional challenges within formal education contexts (Galliers and Huang, 2012). As Bourdieu (1992, p. 222) argues, exposing learners to the realities of social research therefore 'requires a pedagogy which is completely different from that suited to the teaching of knowledge':

> … there is no better manner of mastering the fundamental principles of a practice – the practice of scientific research is no exception here – than by practicing it alongside a kind of guide or coach who provides assurance and reassurance, who sets an example and who corrects you by putting forth, *in situation*, precepts applied directly to the *particular case* at hand. (Bourdieu, 1992, 222; original emphasis)

A feel for the game of research, he concludes, is better gained through an approach more akin to academic supervision or apprenticeship 'in the field' than to knowledge transmission within the classroom.

Some teachers argue that experience 'can help convey the *work* of qualitative research, the methodological decisions required to do such research well, and some of its potential rewards' (DeLyser *et al.*, 2012, p. 18; original emphasis). As such, they may seek to place real research experience at the centre of students' learning and design courses around 'an array of research endeavours and practical experiences' similar to those they might encounter in real research projects (DeLyser *et al.*, 2012, p. 20). This could involve students conducting interviews, transcribing and coding them, and analysing and reporting the data as part of their written assessment. Teachers of quantitative methods have also discussed the value of providing students with experiences of data gathering. In one example, a 'learning by doing' method involving administering student-designed surveys was developed to illustrate the 'challenges of operationalisation' associated with political science research (Aguado, 2009, p. 256). Conducting analyses of relevant data from existing social surveys, such as the Eurobarometer or British Social Attitudes surveys, has been reported as a means of situating the learning of quantitative methods within contemporary examples that are relevant to students' disciplines (Adeney and Carey, 2009). However, this also presents practical challenges, as these data must be 'cleaned', 'impeccably coded' and intuitively labelled so as to be made 'manageable and user-friendly for a novice data analyst' (Adeney and Carey, 2009, p. 199). Teachers thereby use first-hand research experience both to develop and hone learners' skills and to provide insights into the challenge of various research techniques.

An experiential approach may also afford learners the opportunities to undertake more sustained work on a research project. This is seen by some as the 'signature pedagogy' for qualitative research (Eisenhart and Jurow, 2011, p. 701). Students may be expected to undertake an independent research project, individually or in a group, culminating in a report of the research. Such exercises

may still seek to avoid the practical, pedagogical and ethical issues presented by a 'just do it' approach, whereby students are immersed in the field with little training or supervision (DeLyser, 2008, p. 235). Thus, apprenticeship-type models are preferred, whereby students work alongside or under the supervision of more experienced researchers (Roth, 2009). In one particularly ambitious example, education doctoral students were involved in a collaborative action research project involving academics, local schools and community groups (Eisenhart and Jurow, 2011). Students' participation as researchers progressively increased during the course of this project, providing them with opportunities to act, receive feedback from experts and share their findings with the research teams and with the community. Teachers also reported on the use of 'innovative forms of assessment' designed to allow undergraduate students to 'choose their own research questions, deduce their own hypotheses and choose which data sets to work on' (Adeney and Carey, 2009, p. 199). Undertaking a research project is believed to improve students' perceived preparedness for research later in their careers (Shaw *et al.*, 2011). However, logic would suggest that experiential learning of research cannot take place in isolation and that students will also attend classes and lectures and be supervised while undertaking project work (Dousay *et al.*, 2012).

Reflection on the Research Process

A further pedagogical approach evident across some of the literature involves facilitating learning in which students reflect upon their own attitudes towards and experiences of learning and/or conducting research. In learning theory, 'reflective practice' has been used to denote the opposite of practices that rely solely on technical or procedural knowledge (Schon, 1983). In turn, a conceptualisation of learning as reflexive places additional emphasis on learners' own critical stance. To conceive of the learning of research methods as reflexive may involve learners reflecting critically upon their research practice, on the methods they are being taught and on the socio-cultural context within which learning is taking place. Once again, the language of reflexivity was used only in a small number of the papers we reviewed (DeLyser, 2008; DeLyser *et al.*, 2012; Thien, 2009), although approaches that encouraged reflection on the research process as part of students' learning were discussed more widely.

Accounts of reflexive practice in the teaching and learning of research methods were largely confined to qualitative approaches. Indeed, some teachers even describe encouraging reflexivity in the learning of qualitative research with the intention of helping their students to recognise and challenge positivist norms or assumptions (Cox, 2012). Similarly, reflexivity also sought to encourage students to recognise the role of identity or embodied practices (Thien, 2009). In these cases, reflexive learning is intended to 'guide students in examining and documenting their personal assumptions and subjectivities while they navigate the processes of framing research questions, conducting field work, and

presenting findings' (Cox, 2012, p. 133). Students were also encouraged to direct their critical reflections towards the methods being taught (Thien, 2009). As Bourdieu (1992, p. 249) argues, the novice social researcher is caught in a 'double bind' between learning the methodological tools of their trade and questioning their validity, which creates a 'peculiar antimony of the pedagogy of research' whereby 'it must transmit both tested instruments of construction of reality' as well as 'an inclination to question ruthlessly those instruments'. Many traditional instructional techniques such as class discussions or essays may foster such a critical methodological disposition. In other cases, teachers have utilised more novel techniques, such as informal surveys of learners' attitudes (Thien, 2009) or forms of auto-biographical writing (DeLyser, 2008).

Students may also be encouraged to adopt a reflective stance towards their own conduct as researchers, especially when exploring ethnographic or narrative methods (DeLyser *et al.*, 2012). This often involves some form of self-reflexive writing on aspects of the research process; the challenges or difficulties they encountered; how these differed from prior expectations; how the task could have been done differently; and how the conduct of the research might impact on the analysis or writing up (adapted from DeLyser *et al.*, 2012, p. 21). Students may also be encouraged to deploy particular ways of thinking, such as reversing their positionality and considering situations from alternative standpoints by examining the use of language, the symbolism of non-verbal communication, or the role of action, interaction and embodiment in the research process (Hsiung, 2008). The writing itself may take the form of memos (Cox, 2012), journals and diaries (DeLyser *et al.*, 2012) or field notes (Thien, 2009). Learners' self-reflexive writing can also provide teachers with rare insights into students' (pre)conceptions, anxieties or motivations as novice researchers. In one notable development of students' reflective practice, the teacher went as far as to co-author an article on the teaching and learning of research methods for a major peer-reviewed journal with nine of her students (DeLyser *et al.*, 2012). While reflexive writing typically requires students to pay critical attention to their own research practice, instructors have also found innovative ways of using existing interview data to explore how positionality, tension and sensitivity play out in the research of others (Hsiung, 2008).

A complementary, reflexive teaching strategy may be to deploy forms of group discussion for airing underlying assumptions, sharing experiences or critically appraising research practice(s) (Cox, 2012). Bourdieu (1992, p. 218) begins his famous Paris seminar on reflexive sociology with a request that participants discuss their own research with complete candour, stating that: 'Nothing is more universal and universalisable than difficulties. Each of us will find considerable comfort in discovering that a good number of the difficulties that we attribute to our own idiosyncratic awkwardness or incompetence are universally shared'.

Incorporating forms of self-reflexivity into the teaching of research may thus provide a useful basis or stimulus for the sharing of research experiences,

whether on the part of teachers or learners. More broadly, fostering a critical and reflective disposition towards methods is arguably an important aim of methodological learning in itself. That said, such approaches do not purport to replace more 'traditional' modes of instruction, especially in cases where training in foundational skills or capacities is required, such as learning to use a software package or to conduct a form of statistical modelling. However, forms of reflection on action may still prove useful in airing and helping to alleviate students' uncertainties or anxieties over their competence with these technical research skills (Dinauer, 2012).

5. TOWARDS A PEDAGOGY FOR RESEARCH METHODS?

Literature reviews such as this article inevitably have their limitations, in that they are dependent on the comprehensiveness of the review; any systematic search approach may still fail to identify all potentially relevant papers because some relevant papers may not be indexed in ways that allow the search criteria used to identify them. This review, not atypically, was restricted to papers written in English, thus excluding pedagogical insights from non-English-speaking countries. Papers from North American academics dominated the review, both limiting and distorting the conclusions that can be drawn. However, given the international nature of social science research methods, and the global movement of students and academics across the western world, we nevertheless suggest that, with caution, inferences can be drawn. While published reports of practice and practice-related research may not reflect the realities or full extent of pedagogic practice, this review nevertheless indicates an articulated knowledge about pedagogical practices in social research methods of a particular and potentially influential sub-set. Analysis of these recently published papers provides important insights into the practices and the emerging pedagogical knowledge base for research methods.

Our findings are presented and discussed here as a response to the findings of recent systematic reviews, which have indicated substantive gaps in this literature surrounding the 'how to' of teaching research (Earley, 2014; Wagner et al., 2011). We have identified a small corpus within the literature that is characterised by thoughtful and well-informed reflections on the part of teachers who have translated their experiences of the teaching and learning of research methods into an emerging – even burgeoning – body of pedagogical knowledge for our field. Within this diverse literature, we argue that it is possible to discern a number of pedagogical approaches relating to student-centred goals for the learning of research. Engaging learners in the research process, providing hands-on experience and offering opportunities for critical reflection constitute important complementary and overlapping elements of this formally articulated pedagogy. We do not argue that these approaches constitute designs from which methods learning might be derived, but rather that they merely reflect the possibilities of the various roles, practices and affordances through which the learning of

research might be negotiated (Wenger, 1998). The value of this sort of pedagogical knowledge therefore lies in its affordances for stimulating dialogue surrounding teaching practice in light of the insights gained from the experiences of others who have sought to respond to similar challenges and opportunities.

A question remains as to whether this growing literature also constitutes evidence of a 'pedagogical culture' for research methods, as characterised by 'the exchange of ideas within a climate of systematic debate, investigation and evaluation' (Wagner *et al.*, 2011, p. 75). On this benchmark, perhaps we still have some considerable way to go. There remains little evidence of systematic debate, whether in the form of cross-citations within the literature or dialogue between disciplinary or methodological contexts. There also remains little evidence of a 'substantial research base' (Wagner *et al.*, 2011, p. 85), whether in terms of empirical investigation beyond practitioners' reflections on particular courses or of contexts. These are important aspects of pedagogical scholarship in our field, which we should work to address as teachers, practitioners and researchers. More encouragingly, some of the gaps in the literature that Wagner *et al.* (2011, pp. 82–85) identify do appear to be gaining attention. The interdisciplinary nature of the pedagogical approaches we outline above suggest that this literature holds increasing potential to inform audiences beyond disciplinary boundaries. Teachers also appear to be paying increasing attention to the specifics of teaching and learning for particular research methods, approaches or techniques. Perhaps most importantly, they appear closely attuned to the diverse needs of their students, the ways in which they learn various aspects of research, and the teacher's own role in the teaching and learning process.

We therefore find cause for optimism regarding the state of pedagogical practice and enquiry relating to social science research methods, which we see as a welcome adjunct to the policy rhetoric of building research capacity. Within the cross-section of the literature we reviewed, considerable attention is being paid to the ways in which teaching and learning is structured, delivered and facilitated. The potential limitations of past orthodoxies in research methods teaching are being aired and, in response to learners' demands, methods teachers are innovating and experimenting with alternative approaches. Methods teachers are also developing conceptually or theoretically useful frames of reference when reflecting on their teaching practice. The literature we have examined contributes towards the beginnings of pedagogical dialogue that researchers, teachers and learners may begin to capitalise upon, cultivate and celebrate. These welcome discussions of largely student-centred pedagogies for research methods must now be accompanied by empirical research into how students conceive of, experience and apply their methodological learning in a range of contexts. The increased attention directed towards the teaching of research methods at the level of higher education governance constitutes both a cause and an opportunity to further our understanding of the relationships between policy, pedagogy and learning in this area.

6. Acknowledgements

7. References

Adeney, K. and Carey, S. (2009) Contextualising the teaching of statistics in political science, *Politics*, 29 (3), 193–200.

Aguado, A. (2009) Teaching research methods: learning by doing, *Journal of Public Affairs Education*, 15 (2), 251–260.

Baloglu, M. and Zelhart, P. (2003) Statistical anxiety: a detailed review, *Pyschology and Education*, 40, 27–37.

Barnett-Page, E. and Thomas, J. (2009) *Methods for the synthesis of qualitative research: a critical review.* Unpublished National Centre for Research Methods (NCRM) Working Paper, NCRM Hub, University of Southampton.

Boud, D. and Lee, A. (2008) Framing doctoral education as practice. In D. Boud and A. Lee (Eds) *Changing Practices of Doctoral Education* (Abingdon, Routledge), 10–25.

Bourdieu, P. (1992) The practice of reflexive sociology (The Paris Workshop). In P. Bourdieu and L. Wacquant (Eds) *An Invitation to Reflexive Sociology* (Chicago, The University of Chicago Press), 217–260.

Burkley, E. and Burkley, M. (2009) Mythbusters: a tool for teaching research methods in psychology, *Teaching of Psychology*, 36 (3), 179–184.

Camille Peres, S., Lane, D. and Griggs, K. (2010) Using simulations for active learning: the query-first method in practice. Paper presented at the 8th International Conference on Teaching Statistics (ICOTS8), Ljubljana, 11–16 July 2010.

Carifio, J. and Erikson, L. (2007) Towards a theory and view of teaching compressed and abbreviated research methodology and statistics courses, *Journal of Social Sciences*, 3 (4), 250–259.

Cox, R. D. (2012) Teaching qualitative research to practitioner–researchers, *Theory Into Practice*, 51 (2), 129–136.

DeLyser, D. (2008) Teaching qualitative research, *Journal of Geography in Higher Education*, 32 (2), 233–244.

DeLyser, D., Potter, A. E., Chaney, J., Crider, S., Debnam, I., Hanks, G., Hotard, C. D., Modlin, E. A., Pfeiffer, M. and Seemann, J. (2012) Teaching qualitative research: experiential learning in group-based interviews and coding assignments, *Journal of Geography*, 112 (1), 18–28.

Dinauer, L. (2012) Students so close, yet so far away: a case study and best practices for teaching research methods online. Paper presented at the 11th European Conference on Research Methods, University of Bolton, 28–29 June 2012.

Dousay, T. A., Igoche, D. and Branch, R. M. (2012) Self-regulated learning as a foundational principle for a successful strategy in teaching educational research methods to Doctor of Philosophy students. In M. Orey, S. Jones and R. Branch (Eds) *Educational Media and Technology Yearbook* vol. (36) (New York, Springer), 23–36.

Earley, M. (2014) A synthesis of the literature on research methods education, *Teaching in Higher Education*, 19 (3), 242–253.

Eisenhart, M. and Jurow, S. (2011) Teaching qualitative research. In N. Denzin and Y. Lincoln (Eds) *The SAGE Handbook of Qualitative Research* (4th edn) (Thousand Oaks, CA, SAGE), 699–714.

Galliers, R. D. and Huang, J. C. (2012) The teaching of qualitative research methods in information systems: an explorative study utilizing learning theory, *European Journal of Information Systems*, 21 (2), 119–134.

Gönül, F. and Solano, R. (2013) Innovative teaching: an empirical study of computer-aided instruction in quantitative business courses, *Journal of Statistics Education*, 21 (1), 1–22.

Hammersley, M. (2012) Is it possible to teach social research methods well today? Discussion paper presented at HEA Social Sciences Teaching and Learning Summit: Teaching Research Methods, University of Warwick, 21–22 June 2012.

Hsiung, P.-C. (2008) Teaching reflexivity in qualitative interviewing, *Teaching Sociology*, 36 (3), 211–226.

Kane, L. (2004) Educators, learners and active learning methodologies, *International Journal of Lifelong Education*, 23 (3), 275–286.

Keenan, K. and Fontaine, D. (2012) Listening to our students: understanding how they learn research methods in geography, *Journal of Geography*, 111 (6), 224–235.

Keyser, M. (2000) Active learning and cooperative learning: understanding the difference and using both styles effectively, *Research Strategies*, 17 (1), 35–44.

Kolb, D. (1984) *Experiential Learning: Experience as the Source of Learning and Development* (Englewood Cliffs, NJ, Prentice-Hall).

Kottmann, A. (2011) Reform of doctoral training in Europe: a silent revolution? In J. Enders, H. de Boer and D. Westerheijden (Eds) *Reform of Higher Education in Europe* (Rotterdam, Sense Publishers), 29–44.

Leston-Bandeira, C. (2013) Methods teaching through a discipline research-oriented approach, *Politics*, 33 (3), 207–219.

MacInnes, J. (2012) Quantitative methods teaching in UK higher education: the state of the field and how it might be improved. Paper presented at the HEA Social Sciences Teaching and Learning Summit: Teaching Research Methods, University of Warwick, 21–22 June 2012.

Moley, S., Wiles, R. and Sturgis, P. (2013) *Advanced Research Methods Training in the UK: Current Provision and Future Strategies* Unpublished National Centre for Research Methods (NCRM) Working Paper, NCRM Hub, University of Southampton.

National Science Foundation (2011) *Rebuilding the Mosaic: Fostering Research in the Social, Behavioural, and Economic Sciences* (Arlington, VA, National Science Foundation Directorate for Social, Behavioral and Economic Sciences).

Nind, M. (2006) Conducting systematic review in education: a reflexive narrative, *London Review of Education*, 4 (2), 183–195.

Preissle, J. and Roulston, K. (2009) Trends in teaching qualitative research: a 30-year perspective. In M. Garner, C. Wagner and B. Kawulich (Eds) *Teaching Research Methods in the Social Sciences* (Farnham, Ashgate Publishing Group), 13–22.

Roth, W. M. (2009) Apprenticeship: induction to research through praxis of method. In M. Garner, C. Wagner and B. Kawulich (Eds) *Teaching Research Methods in the Social Sciences* (Farnham, Ashgate Publishing Group), 111–118.

Ryan, M., Saunders, C., Rainsford, E. and Thompson, E. (2014) Improving research methods teaching and learning in politics and international relations: a 'reality show' approach, *Politics*, 34 (1), 85–97.

Saldaña, J. (2009) Popular film as an instructional strategy in qualitative research methods courses, *Qualitative Inquiry*, 15 (1), 247–261.

Savage, M. and Burrows, R. (2007) The coming crisis of empirical sociology, *Sociology*, 41 (5), 885–899.

Schon, D. A. (1983) *The Reflective Practitioner: How Professionals Think in Action* (New York, Basic Books).

Schulze, S. (2009) Teaching research methods in a distance education context: Concerns and challenges, *South African Journal of Higher Education*, 23 (5), 992–1008.

Sfard, A. (1998) On two metaphors for learning and the dangers of choosing just one, *Educational Researcher*, 27 (2), 4–13.

Shaw, K., Holbrook, A. and Bourke, S. (2011) Student experience of final-year under-graduate research projects: an exploration of 'research preparedness', *Studies in Higher Education*, 38 (5), 711–727.

Smith, A. and Martinez-Moyano, I. (2012) Techniques in teaching statistics: linking research production and research use, *Journal of Public Affairs Education*, 18 (1), 107–136.

Strayhorn, T. (2009) The (in)effectiveness of various approaches to teaching research methods. In M. Garner, C. Wagner and B. Kawulich (Eds) *Teaching Research Methods in the Social Sciences* (Farnham, Ashgate Publishing Group), 119–130.

The British Academy (2013) *Fuelling prosperity: research and innovation as drivers of UK growth and competitiveness*. Joint statement from the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering and the Royal Society. Available at: http://www.britac.ac.uk/templates/asset-relay.cfm?frmAssetFileID=12529 (accessed 1 February 2014).

Thien, D. (2009) Encouraging gender analysis in research practice, *Journal of Geography in Higher Education*, 33 (3), 351–367.

Tishkovskaya, S. and Lancaster, G. (2012) Statistical education in the 21st century: a review of challenges, teaching innovations and strategies for reform, *Journal of Statistics Education*, 20 (2). Available at: http://www.amstat.org/publications/jse/v20n2/tishkovskaya.pdf (accessed 1 February 2014).

Wagner, C., Garner, M. and Kawulich, B. (2011) The state of the art of teaching research methods in the social sciences: towards a pedagogical culture, *Studies in Higher Education*, 36 (1), 75–88.

Waite, D. (2011) A simple card trick: teaching qualitative data analysis using a deck of playing cards, *Qualitative Inquiry*, 17 (10), 982–985.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning and Identity* (Cambridge, Cambridge University Press).

Wiles, R., Crow, G. and Pain, H. (2011) Innovation in qualitative research methods: a narrative review, *Qualitative Research*, 11 (5), 587–604.

Williams, M., Payne, G., Hodgkinson, L. and Poade, D. (2008) Does British sociology count?: sociology students' attitudes toward quantitative methods, *Sociology*, 42 (5), 1003–1021.

Correspondence
Daniel Kilburn
University of Southampton, Highfield Campus,
Southampton, SO17 1BJ, UK
Email: d.f.kilburn@soton.ac.uk