Student perspectives on learning research methods in the social sciences

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This paper addresses the perspectives of students of social science research methods from a UK study of their holistic experience of learning during two years of postgraduate research training/ early careers as researchers. Unusually the ten participants span diverse institutions and disciplines and three became co-authors. The study used a diary circle combining online diary method with face-to-face focus groups to generate dialogue. Data were analysed narratively and thematically: two individual learning journeys are presented followed by common experiences. The active, experiential learning of the participants is shown and the salient themes of difficulty and struggle lead to discussion of the emotional dimensions of methods learning. The role played by the diary circle in the learning journey is also examined. Based on the findings, it is argued that methods teachers and supervisors would do well to attend more carefully to the social, emotional, active and reflective nature of methods learning.

Keywords: research methods learning, research methods teaching, diary method, active learning, experiential learning

Introduction

In the UK and elsewhere the university teaching of advanced social science research methods is articulated primarily through a supervisor-supervisee apprenticeship model. However, to address perceived capacity problems in UK social science research (Biesta, Allen and Edwards 2011), provision of postgraduate, course-based research methods training is now common. Implicit within this new model is an assumption that academics will deliver courses on research methodology and methods and students completing them will become competent - or at least literate - in the methods of their

discipline. They will develop 'the hard-nosed skills' needed among the workforce (Jenkins, Healey and Zetter 2008, 3). This supersedes a previous assumption that doctoral researchers learn research methods experientially or at the seat of their supervisors (Boud and Lee 2005; Fillery-Travis and Robinson 2018).

The *Pedagogy of Methodological Learning* study (2015-2018) has deconstructed assumptions about the processes involved in research methods education by interrogating the realities of social science research methods learning and teaching (Lewthwaite and Nind 2016; Nind and Lewthwaite 2018a, 2018b). This involved working with stakeholders, including students and early career researchers (ECRs) (hereafter referred to jointly as students of research methods), in collaborative theory building and praxis. The focus of this in this paper is a diary circle of students of social science research methods aimed at understanding their perspectives on their own methods learning and how their learning journey unfolds over time. It is written collaboratively by the researchers (Melanie and Sarah) and three of the participating students (who are given pseudonyms when we discuss their data).

Hsiung (2016, 67), referring to qualitative research, reminds us of the 'inter-dependent and mutually reinforcing relationship' between doing and teaching research, arguing that insufficient attention has been paid to how teaching can contribute to doing research rather than the other way around. Similarly, we argue that in research methods education insufficient attention has been paid to how learning can contribute to teaching - and in turn to doing research. These messy interconnections are central to this paper, though our interest extends beyond qualitative research to all social science research methods and to the social science research methods education environment, which differs considerably from the environment in the natural sciences (Rand 2016).

Student insights greatly enrich studies of undergraduate research methods pedagogy (Levy and Petrulis 2012; Rand 2016; Hosein and Rao 2017; Turner et al. 2018). While there is a literature on student learning at more advanced levels this has limitations and gaps in terms of 'what student learning looks like' (Earley 2014, 248). As Deem and Lucas (2006, 4) argue, compared to the focus on what to teach and even how, there has been 'rather less emphasis on how learning to do research occurs'. The meta-analysis of 25 papers on student experience of learning by Cooper, Chenail and Fleming (2012) was restricted to qualitative research methods. Literature on the experience of doctoral student supervision is mostly, though not exclusively, from the supervisors' perspective. deMarrais, Moret and Pope (2018) explore learning across the doctoral journey, though they focus just on their own students of narrative methods and on learning theory rather than method. Similarly, Lesko, Simmons, Quarshie and Newton (2008) focus on student response to one doctoral course and while Roulson, deMarrais and Lewis (2003) interrogate student data, including reflective journals, this is restricted to one 15-day course.

There is an appreciation in the literature that at the more advanced stages students play a pivotal role in negotiating opportunities and accessing learning resources. Consequently, Boud and Lee (2005) draw attention to the pedagogy within the broader research environment. The literature also shows the value of social networks in (doctoral) researcher formation (Jairam and Kahl 2012; Sweitzer 2009), particularly the role of peers (Hernández-Hernández and Sancho-Gil 2015). Peers, Janta, Lugosi and Brown (2014) observe, are closer than supervisors and can empathise with lived experience. This awareness of the breadth and social nature of the pedagogies involved in learning research methods informed this part of the study, which looked from the students' communal perspectives at their experience of managing their learning.

Diary Circle Method

Rationale

The idea of recording learning journeys through diaries was informed by understanding that attending methods training is only part of the complex picture for methods learners. It was influenced by Wray and Wallace (2011, 246) arguing against systems that promote 'atomistic learning' in methods and by wider evidence that effective pedagogy harnesses learning that takes places outside formal teaching contexts (James and Pollard 2011). The research aim was to access insider perspectives on methods learning journeys over an extended period and, unlike previous studies, to explore the holistic nature of the learning in diverse contexts.

Traditionally diary methods shed light on experiences for self-reflection and/or interrogation by researchers. Diary records are analysed as data or become stimulus material for interviews thereby generating new data (Kenten 2010). In both scenarios participants' experiences become the domain of the researcher and the focus of their analytic gaze, usually without the opportunity for participants to engage with and learn from each other. Melanie and Sarah held a more collaborative stance, however, wanting participating students to benefit, including from the social pedagogies within social media and its associated architecture of participation, bringing mutual reflection in addition to personal reflexivity. We sought to foster peer-networks and optimise the dialogic dimension, thus diary method was adapted into a bespoke methods learning diary circle with linked focus group discussion, taking inspiration from the collaborative inquiry circle described by Broderick et al. (2012). This meant the participating students sharing diary entries - and as it transpired often offering feedback on methods learning – giving this a social dimension.

Participants and process

The sampling frame for participants included students of methods at different stages of their (post)doctoral learning journeys. To optimise diversity, experiences of students from leading UK (Russell Group) universities, 1960s (plate glass) universities, and former polytechnic (new) universities with their different emphases on research or teaching were all represented. The disciplines of business, education, psychology, social statistics, and sociology were also represented. Participants were recruited via university colleagues able to broker access or through direct contact.

Following the ethics protocol approved by University of Southampton, information about the study was shared and informed consent achieved. Participants agreed to document and reflect on their research methods learning experiences as and when they occurred using a password-protected online platform, and to discuss them in three focus groups (at the beginning, middle and end of the project). Engaging and sustaining participants in diary work over time is a recognised challenge (Bartlett and Milligan 2015) and while ten participants were recruited, some become less active, one barely got started and one resigned when changing jobs (see Table 1). New participants were recruited as replacements. The researchers also made 15 diary contributions each, either as interjections to stimulate activity, responses to entries or reflections on our own learning.

<INSERT TABLE 1 AROUND HERE>

Diary Entries

Participants could make diary entries including images, audio or video into a blogging platform (Wordpressv.4.2-4.9), hosted on University systems for data protection). Posting an entry generated an automatic email alert to the group, previewing and linking to the new post. Additional options for access/privacy included an open, public blog

using their own name but, after discussion in the first meeting, the majority felt that this would inhibit frank reflection on experiences of teaching or difficulty in methods learning, with potential tension with professional academic identities for participants and their academic peers, teachers and supervisors. Other rejected open options included preventing the site from being indexed by search engines and/or use of pseudonyms.

Such ethical issues are discussed in the social media literatures where the effects of context-collapse (Wesch 2009) and management of an anticipated, unknown or imagined audience (Marwick and boyd 2011) have been identified as key issues for self-representation in networked publics. With either open mode, anonymity could not be guaranteed ultimately threatening the authenticity of the data. Hence, the group opted for a private, password protected blog requiring logging-in to post and read others' posts/comments. This did not suit all uniformly; Nancy reflected in her exit correspondence: "It is a shame that the others asked for closed diary - for me, things just don't work like that anymore and not having it open meant a longer process of logging in etc etc." Attempts to alleviate barriers to activity were made (offering email-to-blog automated functions, and one password for all). Nonetheless, this remained an ongoing issue for participants.

Focus Groups

The first and second focus groups took place as planned in September 2015 (7 participants, 2 hours) and September 2016 (6 participants, 2x2hour sessions). The first focussed on key methods learning to date: *what* was learned and *how*, what had worked well and the challenges. The second meeting began with talking about one research method each had learned about – or how to use - since we last met and how they learned it. This was followed by exploring patterns in the learning, routes to competence,

methods learning that stood out, and navigation of learning opportunities. The second part was activity-focused with participants scribbling on 'graffiti boards' of emergent themes in a form of participant validation. Participants then undertook a live diary writing studio, responding to the day and one another online.

Bringing everyone together for the final focus group proved too difficult and was replaced by an invitation to provide a final reflective diary entry and response to others, an exit interview in one case, and discussion by participants interested in co-analysing the data and co-authoring this paper. Participants were given shopping vouchers as a token of thanks for their participation.

Analysis

The dataset comprised 78 diary entries incorporating 19 images, 13 single and five multiple responses, totalling 41,000 words plus focus group and interview transcripts. Each author has coded data individually, using a mix of MS Word, paper and pen, and NVivo (v10 and v11). Mixed inductive/deductive thematic analysis has pursued key concepts in the data, critical incidents and emerging patterns. We were initially interested in how the methods learning journey was described and understood and what was deemed pedagogically important. Through immersion in the data we became interested in core narratives and the diary process itself.

Michela conducted narrative analysis to interpret human experiences through their stories using methods learned in her own personal journey. Narrative analysis entails the creation of meanings of human experiences through stories (Polkinghorne1988), in our case stories generated through a shared diary. This creates space to explore ideas such as curiosity and surprise, to dwell in the uncertainties, the unpredictability, the unconvincing (Kim 2016). Re-telling parts of the learning journeys verbatim provides a window to the participants' lives, understanding and interpretations

of their realities. Narrative analysis allows us to explore how participants construct their experiences and assign them meanings. Labov's model, recapitulating the Told in the Telling (Labov and Waletzky 1997) was employed to connect the three elements of language, meaning and action to construct the 'story's plot', constructing narratives using six components: a summary of the story; the context; the skeleton plot; the participant's evaluations of events, or formation of meanings; the narration of the story; and finally, the *coda,* bringing both the narrator and the listener back to the meanings of the story (Kim 2016). Two participants were selected for their relatively full but contrasting narratives.

Findings

Narratives of the researcher-explorer in the 'method learning jungle'

Samantha

When she joined the project, Samantha was about to start her Doctorate in Education. From the start she showed an interest in diary method for her own study; this later evolved into Life History Timeline combined with semi-structured interviews. Samantha summarises her key idea of how to learn research methods:

> the real crux of learning, for me, is listening to those who have used them [methods] and who can identify the pitfalls (this comes from a range of voices) and then you can draw on them as a resource. I then make this fit by applying the knowledge from what I have been taught and read about.

While studying at one end of England, Samantha lived and worked full-time in a university at the other end of the country. Her narrative illustrates her interpretations of the achievements and challenges along the method learning path. Her story constructs a number of instances of what she considers the biggest tools to enable her method

learning and the greatest challenges. Samantha primarily spoke of four key enabling

elements: human support, traditional learning routes, interactions with experts, and

using the method.

Regarding the value of support and peer groups, she concurred with another diary

group member:

> I agree, this is so important. I don't have this support in my office, but to find this I
> have joined 'support groups'. But the most valuable resource for me in regards to
> support has been from my peer group on the EdD programme and [I] really look
> forward to catching up with them.

She often emphasised during her journey the importance of fellow early career

researchers in enabling her 'emotional growth', allowing her to feel more comfortable,

confident and competent, for example:

> there is still always that element of the 'imposter syndrome' when listening to
> others' contributions on the course [where] initially this could be quite
> intimidating. However, as the year has progressed the group is very supportive and
> there is genuine interest in each other's research.

Samantha emphasised the role of other social encounters:

> I have been mulling over the method that I have chosen to use (having had it
> recommended) but after our get together and a meeting with my supervisor a week
> ago I have decided to spread my wings a little.

Her supervisory team had been "challenging but thought-provoking in the use of the

method(s) I wish to use".

Samantha's learning also came through the traditional routes of readings,

textbooks, workshops and taught sessions; she built on these through highly valued

interactions with "experts", "I am not sure that you can read about methods or be taught

methods without having interacted with those who have used them and then the real

learning comes when you use them". She recalled several times that the "real" method learning comes from the practical application, and especially from piloting the method:

> I used the Life History Timeline followed by a semi-structured interview and have developed this through reading, but more importantly within a narrative research group at [my employing] University – practical sessions … to contribute and 'have a go'.

The two main challenges that influenced Samantha's journey were distance and funding. The distance between home/work and her university affected her opportunities for training and networking; it was "difficult to access their courses regularly as I am hindered by the travel and accommodations costs". Further, after an initial interest in Wengraf's Biographic Narrative Interpretive Method (BNIM), Samantha decided to implement the BNIM, only to learn that specific training was required and when funding for this was denied she had to find a different approach. After disappointment and stress this ultimately led to her finding the confidence to take what she needed from the method and use it. When the diary circle closed, Samantha was still conducting her study, which began with intentions to use a diary method and became a Life History Timeline. She had said at the start, "I do feel an explorer at this stage, thinking I might know the way – but do I? I suspect my map will change…" With hindsight, this was a good intuition.

Emma

Emma's story follows a different path. When joining the Diary Circle Emma was a first year PhD student, raising a family away from her institution. She shifted from quantitative research in her undergraduate and masters' degrees to employing constructivist grounded theory for her doctorate in a steep learning curve: "I had no idea

what grounded theory really was when I started my PhD. 'Something qualitative about working from the data' would have summed up this knowledge".

Emma quickly understood that theoretical learning from, for instance, reading or a taught session, was insufficient to acquire confidence and competence. As she recalls, "learning constructivist grounded theory from a book is challenging - it is entirely me engaging with the book. What does this mean? How does this relate to what I am doing?" She could find "plenty of research methods teaching" on the topic, but her journey was characterised by deep self-reflection integral to her development as a researcher. This was facilitated by participation in the study: "I have found the MDC [Methods Diary Circle] to be a supportive space in my PhD journey. This journey has not been easy, for some of the reasons that I have written about previously, and having the MDC has been very helpful". Half way through she recorded

> I have been reflecting on my experience of doing this research, how I feel about the process, the institution, and not least the young people who have been taking part in my study. They are all interconnected. Learning research methods covers so much more than just learning a 'method'.

Emma's learning journey has three interconnected elements: First, her initial encounter with qualitative methodologies, which she was surprised to find were highly regarded in the institution: "psychologists and sociologists in the same room. Whatever next! And, most importantly for me, qualitative methods are an equal part of what research methods is at [my University]". Second, her interactions with supervisors who were "not keen on following methods" in the detailed way she aspired to, preferring "a standpoint of revealing a story in a creative way". Her learning journey involved a "method related crisis" that, while painful, was satisfactorily resolved. Third, the structure she brought to her methods learning from her previous quantitative experience:

This was another reason why constructivist grounded theory appealed to me, as it breaks down the process of analysis very clearly, and you follow the researcher's thinking through their coding and memo writing process through to the generation of theoretical categories.

When Emma's story ended she was teaching herself "to be a pragmatist", balancing competing pressures and approaches to her method, "I have to find a way to make it work". Our lesson taken from the narrative is that learning research methods is much more than learning just a 'method'.

Learning through training, reflecting and doing

Next, we present the findings from across the participants generated through thematic analysis. Access to courses varied considerably and was institution-dependent. James noted the huge size of the training programme catalogue at his research intensive university whereas Alicia reflected on the lack of training in her new university, which when it did exist was "not efficient or effective". There was an appetite for high quality, relevant training but expectations of meeting students' needs were not always met. Poor descriptions of course content contributed to disappointment as exemplified by Emma's entry on attending a two-day Advanced Research Methods school on 'More than human ethnography' in which the staff and students had experienced mismatched assumptions about the attendees and the content. James similarly described starting a course that had turned out to be focused on the micro rather than on his interest in the macro, and so less useful than he had hoped. These entries together highlight the need for accessible, well-described research methods training and gesture to the disjuncture in how methods are conceptualised by students and teachers.

Reflection on learning methods varied from descriptive diary entries to deep research conversations between diary circle members or with the self. Hamis reflected

on a question that struck him on visiting an American university where some students took up peer-assisted learning positions to help other students with research methods:

> The few students that I spoke to indicated that they learnt better from fellow students. I kept wondering why? They said that consultant students (what a fancy name) were able to relate and communicate at the same wavelength with those students that sought help. Moreover, they added that it was easy to "pour themselves out" to a fellow student and discuss what some termed as "silly stuff" compared to a senior staff.

Leila reflected on how she was developing an individual approach to her methods learning and questioned the origins of this:

> I went home and spread out post it notes all over the floor. I didn't read to do that, no-one told me to do that, I hadn't previously seen anyone do it in that way. So where did that come from?
> I think it's perhaps to do with my learning style. I am a visual learner. I have written an entire thesis chapter first in sharpies on sheets on flip chart paper. I once took 16,000 words of a different chapter, and literally cut it to pieces with scissors and stuck it back together again in a different order with Sellotape. So, I think it came naturally to me to do it that way. I needed to physically move around the preliminary codes, make new codes, have different colours post its, draw lines, to actually SEE my analysis.

The Diary Circle facilitated such reflection on learning research methods, including how different parts of the learning journey fitted together, for example, "so after having identified a couple of authors who are considered the gurus on this specific approach and having read about their work, I am now focusing on learning from experience" (Alicia). Central to their reflections was active learning and how diary circle members learned by doing.

Diary entries refer to actively doing things with data or literature and the doing of writing, presenting, and teaching. Doing happened within formal training as well as

beyond it and could include a reflection. Hamis recorded how, in a course on Rasch modelling, the tutor had required the students to generate their own data to use in calibrations, which he appreciated, not minding the later merging of data. James similarly posted on the theme of whether it mattered where the data came from that they work with for learning, noting that,

> something which really helps me is practicing on data that actually matters to me. By this I mean that for me there is difference between 'exercises' on example data, and data I have produced and that, therefore I have a stake in.

Andrew similarly noted that, within the context of an intensive summer school, "It was the act of *creating* the data that was just as important for engagement and interest as the topic itself."

One of the most protracted exchanges between diary circle members developed around the metaphor offered by Nancy of "harvesting" social media data and Marlon's extension of the metaphor in a new direction by observing that he felt more "like a hunter or explorer venturing into unknown with the set of tools that was good for the savanna and which I find less and less useful the deeper I go into the data forest". Samantha identified with feeling like an explorer, while James used the metaphor of "the move from pre-agrarian to agricultural society" to support his own learning. There followed an exchange with links to a short story from which further learning could be drawn (not the only incidence of learning from stories in the diary circle).

Participants planned doing things with the research methods literature into their learning process, doing a "mini literature review … to get more into it" (Alicia) or strategizing, "Just today I have noted down three different texts to read when I get back" (Leila). Leila described paraphrasing and colour-coding and Emma spoke of writing down questions as she reads. For James textbooks were "good for step-by-step

learning rather than the sustained reflections …'learning how' to use research methods clearly doesn't come from a textbook". Nevertheless, he recorded returning to the textbooks when his fieldwork was about to begin, to refresh his memory and pick up tips, seeking reassurance more than challenge. Emma similarly saw textbooks as useful but insufficient, and Samantha noted that while a detailed manual enables "understanding of the underlying principles", "it is very much learn as you go along".

Diary circle members described learning by articulating to an audience such as presenting an analytic method to a 'Work in Progress' seminar and digesting the feedback (Marlon). They attempted to tease out the learning benefits of presenting. Emma noted, "it gives you an opportunity to recap and 'crystallise' where you are currently at in your thinking and research", and Hamis saw and experienced the importance of understandable language in making complex quantitative methods accessible to qualitative researchers.

Diary circle members showed how doing and feeling were interwoven. Samantha recorded "the lift I have felt from their [participants'] interest and engagement in the pilot". She intermingled doing, talking, reading and reflecting through "tapping into" the knowledge of her supervisors, dialogue with colleagues and reading a core text. Similarly, Emma described first getting "a feel for what grounded theory might be" from a course, before beginning to read the classic text on the method, having an emotional response and changing tack. "I felt that the methods were not entirely 'me' and I read around a bit more…"

The dialogic dimension of learning was valued, especially engaging with "people from different disciplines [who, surprisingly] talk and work together!" (Emma). James highlighted the role of social encounters for incidental learning, hearing about a method or study at an opportune moment, while Hamis focused on creating his own

dialogic opportunities including his "chance to be a visiting scholar" overseas. James appreciated a 'writing club' of PhD friends meeting weekly in a coffee shop to discuss a short piece of writing related to a shared issue. Leila posted about her struggles with learning effect sizes and the solution lying with peers "talking about it, people providing a sounding board for discussion and explanation and understanding". She celebrated another incident when "together, collectively… We worked it out". Samantha similarly welcomed the supportive role that the "non-threatening environment" of joining a narrative research group was playing.

Applying methods is a central pillar in learning to use them and was often the pinnacle of the learning journey. Alicia described liaising with more experienced people, getting advice and ideas, networking and doing workshops while "waiting to start my own process of life history interviews next month to teach me the rest". Samantha and Emma similarly recorded the authentic learning via piloting and finding what the books do not tell you.

Leila picked up on this "jump between thinking you know what you are doing, and then actually doing it." She later posted about her experience of recruiting participants and having found the realities differed from her reading about her plan "to go ask everyone I know how they do telephone interviews. Because I think their experiences might be more beneficial than the literature." Samantha recorded that authentic learning can also be supported through scaffolding: "I am very fortunate that my two supervisors have blocked off an afternoon to 'have a go!' [at analysis] with me".

Participants mostly had some role in teaching research methods as well as learning them, which meant revising their own knowledge of methods, articulating methods for an audience and learning from undergraduates' fresh perspectives. There

could be a symbiotic relationship between the teaching and learning, with Nancy recording that with her group of practitioners, "we are more of a research team of co-learners …slowly getting [our] heads around" application of a method together. Marlon though preferred learning research methods to teaching them as learning "gives you a chance to get lost and be innovative" rather than focusing on "being correct".

Emotions in the learning journey

Diary circle members discussed learning methods as a challenging emotional journey. They discussed embarking on their journey, identifying their "first stab" at methods. There were references to being "encouraged to 'get lost' and 'make mistakes'" (Hamis). This allowed methods learners to feel more confident "going out of your comfort zone" (Marlon). If they had already identified a method for their research, they could focus their learning journey and feel more in control. Finding themselves sometimes disengaged from the learning process was common but temporary. Samantha compared learning research methods to running a marathon, "yes there are constant hurdles to jump, but it's exciting".

One emotional challenge was lack of self-confidence with some participants seeing themselves lacking knowledge and understanding, "they're going to find out that I'm a complete fraud" (Leila). Alicia reflected on feeling "really uncomfortable" and unprepared in "a completely new place" and Leila commented, "I have absolutely no idea what I am doing" and "the more I learn the less I know". However, throughout their learning journeys, the participants felt they gained confidence in their methods competence, in their choice of methodology, and when presenting or discussing methods.

Experiencing a tension between formal learning and chaotic learning opportunities often led to participants feeling isolated and unsupported. Learning

opportunities could be irregular and infrequent: "I would say my methods learning to date is haphazard; a lot of it self-taught" (Emma). There was also the emotional pain of making compromises, such as Emma's recognition that "It has to be a PhD that my supervisors are happy with" and Hamis' note that "it all boils to fitting in the whims of the powers that be". Sporadic, chaotic and self-learning led to isolation during the learning journey with James noting that the learning could be "quite lonely … you can be very isolated". The need for support and encouragement was summed up by Hamis, "We are adults but little".

Negative emotions throughout the methods learning journey included being overwhelmed as well as stressed and anxious. Marlon expressed this through metaphor (his hunter with inadequate tools) as did Hamis ("I carried with me the mentality likened to an African hunter anticipating to face off with a lion in the jungle"). Alicia described "swinging between the feeling of enthusiasm and terror (of failing) at the same time" and Hamis remembered "a time when I cried in front of my computer". Peer support helped and was often less stressful than supervisor support or bolstering "before you take your ideas to your supervisor" (Leila). The absence of "the power gap" when you are "on the same level" (Hamis) was helpful including when exchanging research tips, methodological advice, pastoral support and feeling part of a learning community which increased people's confidence.

At end-points (such as handing in their thesis, or submitting an article) diary circle members identified the beauty of the methods they had learnt or talked passionately about their research projects and methods, stressing their attachment (a "deep personal connection" with their chosen method (Emma) and how you could "'fall in love' with the stuff" (Hamis).

Discussion

The data presented enrich the literature on what it means to learn advanced social science research methods. The student/learner perspectives often resonate with the views of methods teachers on what is important. Methods teachers dedicate careful thought to whether the data they use in their teaching is authentic, how engaging it is, and how much ownership students feel over it (Nind and Lewthwaite 2018a) and these students of methods confirm that these things matter. Another point of connection with teachers is the valuing of visual metaphors and non-technical language shared by expert teachers (Lewthwaite and Nind 2016) and methods learners.

The emotional aspect of learning social research methods has received less attention from teachers, though it has been noted in in the literature. Cooper et al. (2012) observed 'a range of emotions including anxiety, frustration, excitement, and amazement' in the studies of learning qualitative research, and Lesko et al. (2008, 1541) describe having to 'tame some disturbing aspects' of their research methods education owing to their students' turmoil. Historically, emotions have not sat well with scholarly endeavour (Blackman, 2007). Weeks (2009, 5), though, argues that the 'reflexive turn' in social research is recognition of the emotional qualities of researchers and participants. Diary circle members (more particularly, those who stayed involved), were clearly comfortable with this reflexive, 'emotional turn'. While they were not recording the intimate aspects of everyday life that Weeks refers to, they were still recording and discussing the emotionality of their experiences.

Other research methods may not have led us to see the full spectrum of emotional responses to learning research methods in the way the diaries did, limiting us instead to the dominant discourse of statistics anxiety and fear (see Wagner, Garner and Kawulich 2011; Earley 2014; Ralston et al. 2016). Punch (2012, 87) discusses the role

of the fieldwork diary for enabling 'researchers to scrutinise their personal challenges and emotions in relation to the research process' and learning diaries may function similarly. For Punch, such scrutiny of diary entries is important in understanding the 'often hidden struggles in the production of knowledge' (p.87); the fieldwork diary she used to articulate frustrations and difficulties helped her to get through and the Diary Circle may have worked likewise: Her key concerns, 'practical difficulties, emotions, academic concerns and guilt', and emotions experienced in the field, 'loneliness, frustration, despair, unease, uncertainty, disappointment, anger, self-pity, failure and inadequacy' (p.88) are remarkably reminiscent of our data. While Punch notes that field diaries connect researchers with research participants and with the raw realities and immediacy of the experience, diary circle entries offer the group potential connectedness with people they may teach in the future.

While Howard and Brady (2015) describe a consensus that undergraduate social science research methods learners are uninterested in learning research methods, these more advanced learners had a hunger for learning opportunities. Ryan and Ryan (2013) argue that academic reflection is not intuitive and that skilled teaching is necessary to support students' learning to engage in deep, meaningful reflection for transformative learning. This support was built into Howard and Brady's (2015) constructivist approach and they are reflexive about their creation of an open, reflective research environment which enables learners to challenge their methods' thinking and engage in a research conversation. The diary circle similarly became a place of reflective learning - for research conversations between learners as well as conversations with the self, both of which could be transformative.

Fillery-Travis and Robinson (2018) note the importance of learning conversations (Shotter 1993) within doctoral pedagogy and the diary circle was good

for facilitating learning conversations between peers, supporting participants in the process of making sense of their learning experience or indeed the challenges they faced. This peer learning was reciprocal in the way that Boud, Cohen and Sampson (2001) describe, creating a rich new pedagogical space to supplement the spaces the participants were reflecting upon. While Boud and Lee (2005) used a series of interviews to ask research students who they learned with and from and how, their interview method did not foster reciprocity in peer learning in the way that the diary circle did. The diary dataset is replete with enquiries about and explanations of different methods as the participants formed an audience for each other. It demonstrates aspects of a cultural model (Deem and Lucas 2006) as researchers with more and less experience share and support each other's learning.

Conclusions

To date insufficient attention has been paid to the pedagogy of advanced methodological learning in the social sciences and in particular to holistic learning experiences across different kinds of methods and disciplines. As the teaching, learning and doing of research is so interdependent, it is imperative that we understand how research methods learning happens over time in planned and unplanned ways and to do so from the perspectives of students in dialogue. This paper has addressed this and shown that doctoral and early career researchers engage with a range of opportunities and endure a mix of emotions during their methods learning journeys, particularly valuing and reflecting on their own and others' authentic experience of applying methods. Based on our evidence we see the necessity of community to methods learning in which formal training is just one part, supported by creative engagement with stories, visuals and metaphors. We argue that methods teachers and supervisors would do well to attend carefully to the social, emotional, active and reflective nature of methods

learning. We need to recognise that engagement with methods learning is different at different stages in the journey and create spaces to reflect on the unique ways in which each learner is negotiating the process to help to make it feel less haphazard and overwhelming.

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Table 1 Participants and participation