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Student perspectives on learning research methods in the social sciences

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ABSTRACT

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 their 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 to produce two individual learning journeys and a synthesis of common experiences. Findings show the active, experiential learning of the participants alongside salient themes of difficulty and struggle. This leads to discussion of the emotional dimensions of methods learning and implications for teaching. The iterative role of the diary circle in the learning journey is also examined. The paper argues that teachers and supervisors should attend more carefully to the social, emotional, active and reflective nature of methods learning.

Introduction

In the UK and elsewhere a perceived capacity problem for social science research (Biesta, Allan, and Edwards 2011) is being addressed by provision of postgraduate, course-based research methods training. There is an implicit assumption that academics will deliver courses on research methodology and methods and students completing them will become competent (or at least literate) in those methods, developing 'the hard-nosed skills' needed among the workforce (Jenkins, Healey, and Zetter 2008, 3). This supersedes a previous model and 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 focused on the realities of social science research methods learning and teaching (Lewthwaite and Nind 2016; Nind and Lewthwaite 2018a, 2018b). This has involved working with stakeholders, including students and early career researchers (hereafter referred to jointly as students of

research methods), to build a picture of pedagogic practices in this arena. This paper focuses on the diary circle part of that study in which students of social science research methods shared their perspectives on their methods learning over time. It is written collaboratively by the researchers (Melanie and Sarah) and three of the participating students (Michelle, Michela and Cordelia who are given pseudonyms when we discuss their data). The aim is to understand methods learning journeys and the implications of this for teaching social research methods in higher education.

The complex interconnections between doing research and teaching research methods are central to this paper. Hsiung (2016, 67) reminds us of the 'inter-dependent and mutually reinforcing' nature of the relationship between these, 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.

Student insights greatly enrich studies of undergraduate research methods pedagogy (Rand 2016; Hosein and Rao 2017; Turner et al. 2018) and while there is a literature on student learning at advanced levels this is limited in terms of showing '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'. Notably, studies of doctoral student supervision are mostly, though not exclusively, from the supervisors' perspective. With the insights of advanced methods learners remaining under-researched this paper helps to fill a gap in the literature.

Methodologically, the methods learning literature is characterised by small-scale, time-limited, single cohort studies that focus on specific methods or disciplines (see e.g. Probst et al. 2016; De Marrais, Moret, and Pope 2018). Such research, though valuable, remains largely bounded by discipline, method and cohort. To illustrate, while Roulston, de Marrais, and Lewis (2003) interrogate student data and Lesko et al. (2008) focus on student responses, each looks at just one doctoral course. A recent meta-analysis of 25 papers on student experience of learning (Cooper, Chenail, and Fleming 2012) was restricted to qualitative research methods. New approaches to engaging learners' experience, such as collaborative authoring between instructors and students (Probst et al. 2016), are emerging slowly.

Consideration of the broad social environment (Boud and Lee 2005) and of social pedagogies of learning research methods informed this research and our concern with students' communal perspectives of managing their learning. Students at more advanced levels play a pivotal role in negotiating opportunities and accessing learning resources. Within this, social networks are valuable in (doctoral) researcher formation (Sweitzer 2009; Jairam and Kahl 2012) and peers have a particular role (Hernández-Hernández and Sancho-Gil 2015), especially as they are closer than supervisors and can empathise around lived experience (Janta, Lugosi, and Brown 2014).

Diary circle method

Rationale

A diary circle method was devised to meet the aims: (i) to access insider perspectives on a range of methods learning journeys over an extended period, and (ii) to explore the

holistic nature of the learning in diverse contexts. The research design was influenced by both Wray and Wallace (2011, 246), who argue 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). Recording methods learning journeys through diaries would recognise that formal methods training is only one part of complex methods learning, and that change over time is an important aspect (Zirkel, Garcia, and Murphy 2015) as understanding may accrue, develop and deepen dynamically in both the short and longer-term.

Traditionally diary methods shed light on experiences for self-reflection or for 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 participants in the study to benefit from the social environment created by the shared online diary, bringing mutual reflection in addition to personal reflexivity. We sought to foster peer-networks and optimise the dialogic dimension. Therefore, taking inspiration from the collaborative inquiry circle described by Broderick et al. (2012), diary method was adapted into a bespoke methods learning diary circle with linked focus group discussion.

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 universities with strongly varied emphases on research or teaching were included. A variety of disciplines including business, education, psychology, social statistics, and sociology was 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, plus discuss them in three focus groups (at the project's beginning, middle and end). 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); replacements were recruited. The researchers also made 15 diary contributions each, interjecting to stimulate activity, responding to entries or reflecting on our own learning.

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. This generated an automatic email alert to the group, previewing and linking to the new post. The option of an open, public blog using their own name was rejected as the majority felt that this would inhibit frank reflection on experiences of teaching or difficulty in

Table 1. Participants and participation.

Participant	Context start-end	Involvement	Contribution
Emma	Early PhD – near submission, learning grounded theory methods, 1960s university	Oct 2015 – Sept 2017	16 entries 2 focus groups
Alicia	Early PhD – near submission, learning life history methods, new university	Oct 2015 – Sept 2017	7 entries 2 focus groups
James	Early PhD – mid PhD, learning discourse analysis methods, Russell Group university	Oct 2015 – Sept 2017	16 entries 2 focus groups
Samantha	EdD taught part – research part, learning diary & biographical methods, Russell Group university	Oct 2015 – Sept 2017	24 entries 2 focus groups
Marlon	Early PhD – near submission, learning quantitative methods, 1960s university	Oct 2015 – Sept 2017	6 entries 2 focus groups
Elouise	Early PhD, learning quantitative methods, Russell Group university	Oct 2015 – June 2016	1 entry 1 focus group
Nancy	Post-doc ECR, applying methods in digital contexts	Oct 2015 – Aug 2016	13 entries 2 focus groups
Hamis	Late PhD – first post, learning quantitative methods, Russell Group university, international student	Nov 2015 – Sept 2016	11 entries, 1 entry & 1 exit interview
Leila	Mid PhD, learning mixed methods, Russell Group university	June 2016 – Sept 2017	11 entries 1 focus group
Andrew	Post-doc ECR, applying methods in digital contexts	June 2016 – Sept 2017	6 entries 1 focus group

methods learning. 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.

The group opted for a private, password protected blog requiring logging-in to post and to 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.' Despite attempts to alleviate barriers to activity (offering email-to-blog automated functions, and one password for all) taking time to log in remained an 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, 2×2hour sessions). The first focussed on key methods learning to date: *what* was learned and *how*, what had worked well and what had been challenging. The second meeting began with talking about one research method each had learned since we last met and how they learned it. This was followed by exploring patterns in participants' learning, routes to competence, methods learning that stood out, and navigation of learning opportunities. The second part was devoted to participant validation of emergent themes. Participation ended with a live diary writing studio responding to the day and one another.

Bringing everyone together for the final focus group proved too difficult and this 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 also became interested in core narratives and the diary process itself.

Michela conducted narrative analysis to interpret participant experiences through their stories using methods learned in her own personal journey. Narrative analysis entails the creation of meanings of human experiences through stories (Polkinghorne 1988), in our case stories generated through a shared diary. Re-telling parts of the learning journeys verbatim provides a window to the participants' lives, understanding and interpretations of their realities. 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 evaluation of events or formation of meanings; the narration of the story; and 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 learning journey

Samantha

When she joined the project, Samantha was about to start her Doctorate in Education. Her initial interest in diary method evolved into Life History Timeline combined with semi-structured interviews. Samantha summarises, 'the real crux of learning, for me, is listening to those who have used them [methods] and who can identify the pitfalls … draw[ing] on them as a resource' and applying this to '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 methods learning path. She identifies what she considers the biggest tools to enable her methods learning: 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 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 including 'after 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'.

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. These affected her opportunities for training and networking, e.g. it was 'difficult to access their courses regularly as I am hindered by the travel and accommodations costs'. 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 had begun with intentions to use 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. 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: '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. This was facilitated by participation in the Methods Diary Circle, which she found to be a 'supportive space'; '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. 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, which made the steps of constructivist grounded theory appealing to her.

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'. Her narrative highlights 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 which led to the three core interrelated themes of learning through training, learning through reflecting and learning through doing, with the additional motifs of learning from experts, the role of peer support and emotional journeys. Access to *training* courses varied considerably and was institution-dependent. James noted the huge training programme catalogue at his research intensive university, whereas Alicia reflected on the lack of training in her new university and that when training did exist that it 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 resulted in staff and students experiencing mismatched assumptions about attendees and course content. These data highlight the need for accessible, well-described research methods training and for a shared conceptualisation between students and teachers.

Records of learning methods varied from descriptive diary entries to deep *reflecting* – in 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?

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.

Diary entries refer to actively *doing* things with data or literature and the practices of writing, presenting, and teaching. These occurred within formal training as well as beyond it and could include 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. He observed that he felt more 'like a hunter or explorer venturing into the 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. 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 how 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'. 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'. The participants' insights can inform the teaching of others as well as their own development as teachers as we shall go on to discuss.

Emotions in the learning journey

Diary circle members saw learning methods as a challenging emotional journey. They discussed embarking on their journey, identifying their 'first stab' at methods, being 'encouraged to "get lost" and "make mistakes"' (Hamis). This allowed them to feel more confident about '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. Despite the 'constant hurdles to jump' the learning was 'exciting' (Samantha).

One emotional challenge was lack of self-confidence with some participants seeing themselves lacking knowledge and understanding. Alicia reflected on feeling 'really uncomfortable' and unprepared and Leila commented, 'I have absolutely no idea what I am doing' and 'the more I learn the less I know' – 'they're going to find out that I'm a complete fraud'. 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, 'quite lonely' (James) and unsupported. Learning opportunities could be irregular and infrequent making methods learning 'haphazard' (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'. The need for support and encouragement was summed up by Hamis, 'We are adults but little'.

The learning journey could feel overwhelming and stressful. 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, bolstering them before taking their ideas to the supervisor. The absence of 'the power gap' when you are 'on the same level' (Hamis) was helpful for exchanging research tips, methodological advice, pastoral support and feeling part of a learning community.

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 – 'deep personal connection' – with their chosen method (Emma) and how you could '"fall in love" with the stuff' (Hamis).

Discussion

The findings expand our understanding of what it means to be learning advanced social science research methods. The illumination of students' own perspectives of learning provides insight into the pedagogies and student practices of methods learning, often endorsing teachers' judgements. 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 confirmed that these things matter. An additional point of connection between teachers and learners

is the valuing of visual metaphors and non-technical language identified in teachers by Lewthwaite and Nind (2016). The findings presented here, though not challenging current practices, have implications for pedagogic decision-making.

This research has underlined the important emotional aspect of learning social research methods, which has been noted in the literature, but which traditionally has received less attention from teachers. Cooper, Chenail, and Fleming (2012) observed 'a range of emotions including anxiety, frustration, excitement, and amazement' in 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. Weeks (2009, 5) argues that the 'reflexive turn' in social research constitutes a recognition of the emotional qualities of both 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. This went far beyond the statistics anxiety and fear (see Wagner, Garner, and Kawulich 2011; Earley 2014; Ralston et al. 2016) that dominates the literature. This also carries implications for teachers who need to build means for giving emotional as well as intellectual support into their pedagogic approach.

Other research designs may not have led us to see the full spectrum of emotional responses to learning research methods in the way the diary circle did. 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, 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 manage and the Diary Circle may have worked likewise. Her key concerns – 'practical difficulties, emotions, academic concerns and guilt', and her 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.

This paper has demonstrated the potential for diaries to assist reflexively, both in the struggle of *doing* method, but also in the process of learning methods. It shows the value of diaries as a platform for group connectedness, bridging between teachers and learners. The research struggle and isolation felt by several of the participants, and highlighted by Punch, was balanced by the feelings of connection, peer support and belonging offered by peers through the diary circle.

While Howard and Brady (2015) describe a consensus that undergraduate social science research methods learners are uninterested in learning research methods, these advanced learners had a hunger for learning opportunities. Ryan (2013) argues 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. The diary circle, like Howard and Brady's (2015) carefully designed constructivist approach, created an open, reflective research environment for learners to challenge their methods' thinking and engage in a research conversation. This reflexive turn is a substantial theme in the nascent advanced methods teaching literature (Kilburn, Nind, and Wiles 2014), indicating the importance of spaces for shared reflection as venues for extending methods learning.

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 over a sustained period. As the teaching, learning and doing of research are so interdependent (Hsiung 2016), it is imperative that we understand how research methods learning happens in planned and unplanned ways and to do so in dialogue with the perspectives of students. This paper has addressed these issues, and in doing so has 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 peers' 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. Teaching people to be health professionals, teachers or social workers almost inevitably means engagement in pedagogic cultures that recognise and build from a valuing of active and experiential learning (see e.g. Goldstein 2001; James and Pollard 2011; Waltz, Jenkins, and Han 2014 respectively). Teachers of research methods/researchers are less likely to benefit from such pedagogic cultures (Wagner, Garner, and Kawulich 2011), but listening to learners on this can provide a route to appreciating these approaches.

An implication of our findings is that methods teachers need to recognise that engagement with methods learning is different at different stages in the journey and we therefore need to 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. To engage these dynamics, we might expand student-centred approaches to research methods teaching, using strategies that take learners 'behind the scenes' (Sharlene Hesse-Biber, in Lewthwaite and Nind 2016, 13) to dismantle motions of 'perfect' research. By sharing peer and teacher accounts of messiness, imperfection, struggle and emotion in research – accounts that are often missing from published literature – teachers of social research methods can connect with learners' needs and desires to hear researchers' experiences and to learn from their insights.

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