Online communities that support postgraduate wellbeing

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1. Introduction

This chapter considers how online communities can support the wellbeing and mental health of postgraduate students, with particular focus on the role of peer support, and the ways that technology can be used to facilitate and enhance connections. We present two case studies - special interest networks for researchers and a specific project using photography for well-being - which illustrate how different kinds of online communities can be initiated within the PGR learning community, and the impact they can have. Both case studies pre-date the COVID-19 pandemic which began in early 2020, and which necessitated the rapid shift online of much teaching, research, supervision and other contact which would previously have taken place face-to-face. This has highlighted the potential value of online communities and also brought into focus some of the problems inherent with online interaction, including the impact on individual PGR well-being which can be both positive and negative.

1.1 Supporting the early phases of the doctoral journey

"I spent ages not really sure what was meant to be happening with the PhD, and I should have said something sooner but I was too embarrassed, honestly, I felt too ashamed, like I should have known"

In our work with PGRs, we often encounter people in the above keenly felt situation. They may be mid-way through their program of doctoral study and have realised something feels wrong. They may be closer to the end stages and feeling the pressures of time as they head towards thesis submission date with significant fears about how they will get the thesis written on time. Over time, uncertainties that go unresolved from the earliest stages of the doctorate, escalate into prolonged worrying, and a feeling of 'never having found your feet' may escalate into anxiousness, anxiety and panic. Not knowing 'the rules' of academia, and having never experienced the researcher-supervisor relationship before, postgraduate researchers can find it difficult to transition to the demands of doctoral study. The process of transition to university undergraduate study has received significant attention in the literature but the transition to the doctorate has not been characterised to the same extent. There has been a tendency to assume that the transition to postgraduate study is taking place in a similar educational environment, and so will be less problematic (Tobbell & O'Donnell, 2013).

In working with researchers in coaching or mentoring settings, we invite them to reflect on the events, relationships and study strategies that led them to be experiencing their doctorate in a stressful way. In doing so, they express a set of common regrets. They may feel that they wasted time by waiting too long to take action to resolve the unknowns, or that they had their time wasted by hands-off supervisors and would like to have been guided

more firmly in the early stages, or that they got lost in the middle and weren't as proactive as they might otherwise have been. Importantly, it's very common that these researchers feel that being behind, making slow progress or underperforming is not their usual mode of operating.

"Being a rubbish student is way out of character for me, I've got top marks before in literally everything else. This works differently though, no-one is really helping you. The landmarks of modules and deadlines are gone you know, and instead it's just one long slog where you're thinking, am I doing this right?! It's been one long and confusing experience."

This is a matter of importance because when people who have a prior track record of high performance and success start to feel lost and fall behind, we can infer that the cause is not a simple matter of not having high enough intellectual capability. Transitions to doctoral education are complex, demanding and emotional and can be hampered by out-of-date narratives of success that position transitioning as an objective, academic progression, that comes easy to intellectually capable students. The progression into postgraduate doctoral study may in fact be the most significant transitional leap for a student due to higher workload, unscaffolded self-directed study, less support and an incomparable learning environment (McPherson et al, 2018). Our own work with students struggling to transition, and data collected through our Thesis Mentoring programme, reveal an expectation mismatch rather than a failure to recruit the 'right' students to doctoral programmes, as university rhetoric can often imply. The tools of study and hard work that these high-achieving students had spent years honing, suddenly no longer serve them well — not on this bigger, more complex project for which they find themselves responsible. The doctorate is usually associated with a transition from dependence to independence, as the learner becomes the professional researcher or academic (Laudel & Gläser, 2007) and the strategies they developed through their prior experience of more structured university study, don't transfer to doctoral level study in a straightforward way. Study strategies require examination and adaptation but can be slow to re-normalise in a culture where the 'norms' are hidden because solo projects are the primary structure for doctoral study and isolated working reigns. It's no wonder then that, amidst this confusion, early-stage doctoral students have been identified as a group that are at specific risk of withdrawing (Lovitts and Nelson, 2000).

1.2 Leveraging informal learning for researcher wellbeing

Doctoral students experience significant stress and anxiety (Garcia-Williams et al, 2014). Contributing factors include time pressures, uncertainty about doctoral processes, sense of belonging in scholarly communities, and financial pressures (Cornwall et al, 2018). Working within researcher communities, we speak often to people who describe feeling lost, isolated and confused. As old study strategies fall away, researchers' confidence, self-belief and enthusiasm can be eroded, and insecurities and a fear of falling behind, or not being 'good enough', arise. Previous research reports that 80% of postgraduates find their first year overwhelming (Cluett & Skene, 2006) and feelings of isolation and 'imposter syndrome' are not uncommon. Doctoral students can expect some pressure from the challenges of new learning, and do accept that some stress is a normal part of work life. However, in an unfamiliar work environment, postgraduate students can find it hard to know whether they are experiencing the 'healthy' stretch and pressure of being intellectually challenged or the

'unhealthy' chronic stress that impacts on their wellbeing (Metcalfe & Wilson, 2018). Developing good professional strategies that enable a researcher to stay buoyant through new challenges and uncertainties, and to cope with taking on higher responsibility, is a necessary process in the maintenance of academic wellbeing (Schmidt & Umans, 2014; Stubb, Pyhältö, & Lonka, 2011). We know that making sense of transitional experiences can be supported by good professional relationships, and that the supervisory relationship is a large part of this process. Supervisory relationships play a large role in facilitating transitions to doctoral study (McAlpine and McKinnon 2013; Wisker and Robinson 2013). We also know from an emerging body of work on the hidden curriculum of doctoral education, that the range of supportive and influential relationships in doctoral learning can be broad, complementing and expanding on a researcher's academic development through supervisory relationships (Wisker et al, 2017). Doctoral learners are often sustained by unseen, rarely recognised informal structures, social support systems and extra-curricular activities (Hopwood, 2010).

If our new postgraduate researchers had opted to enter into a graduate job or training scheme instead of enrolling in further study, their first and formative understanding of their role and responsibilities within a new workplace culture would have been informed by a job description and a contract of employment. Perhaps these basic guidance documents would have been supplemented by an induction to the organisational structure, culture and values, scaffolded by accountable line management, and complemented by networks of wider colleagues and perhaps even a mentor. All of these ways of supporting and enhancing transitional learning can be adopted for doctoral programmes. They can be introduced into doctoral support structures as accessible inclusive practices, or empty promises, depending on how they are conceptualised, and how they are positioned within the institution. Our own roles in supporting the development of new doctoral researchers has been to leverage the informal relationships and learning opportunities as well as the more traditional PGR learning spaces. We strive to add value to early doctoral learning processes and to adapt good practice examples of the above ideas for busy researchers who may not come on to campus very frequently, and who may be located across vast disciplinary areas. Questions arising for us as practitioners are: How can we build accessible and responsive online systems that support transition, and network building? And, how can online communities encourage the building of professional relationships between peers, that allow for the exchange of knowledge and also facilitate emotional support between peers?

1.3 Use of technology in wellbeing

The rapid increase in the availability of high speed, compact digital processors has led to a huge increase in the use of computers, laptops and mobile devices in many areas of life. Technological solutions have, throughout the ages and in many forms, been proposed as ways of improving lives, beating illness and cheating death. The current incarnation of this is the plethora of apps which jostle for attention on the screens of mobile phones around the world. With the huge processing power that can now be contained within our pockets, we have small supercomputers which can be used to monitor health states and diagnose illness, connect us with other people all over the planet, and access immeasurably large archives of information. Online therapy is now a reality in which 13 different web apps and 35 different smartphone apps for depression, anxiety or stress are available through either referral services or the online NHS Apps Libraries (Bennion et al, 2017). Computer-based

self-help programmes are increasingly common, for example, Beating the Blues, MindGym, and Living Life to the Full (some of which have been recommended by NICE, 2006). With the move towards Artificial Intelligence, a new era of interaction by voice, facial recognition and quasi-intelligent agents is dawning, with an increase in personalisation across health and education. Virtual and augmented reality are providing immersive experiences with therapeutic potential. Thus, the tools we consider to be 'new technologies' give us new powers for us to harness, and whilst these innovations are presented to consumer markets packaged in utopian messaging, they also open up new questions to be answered. What role can they play in helping us to live well?

For the postgraduate researcher embarking on the doctorate, it is likely that digital technology will play an important role, not only in the practicalities of research (such as retrieval and organisation of information, searching for useful resources, use of technical equipment and computer software) but also in the promotion and maintenance of psychological well-being. The PGR experience can be a solitary one, and there is evidence that this social isolation is a factor in low levels of well-being (The Conversation, 2019; Belkhir et al, 2019); digital and online technologies offer many solutions to this isolation, and whilst there is an increasing awareness that social media can have some drawbacks (Kross et al, 2013; Lin & Utz, 2015; McDool et al, 2016; Steers et al, 2014), the ability to connect with other communities of interest is potentially very useful for doctoral students, and these same tools can facilitate valuable contact with family and friends.

1.4 Use of online platforms in learning

With the development of the hardware, software and infrastructure which have made the information revolution possible has come the potential to reimagine the whole process and experience of education. The capacity for connection, so efficiently harnessed by social media platforms, has had huge implications for education. We now live in a world where the answer to a particular question can be rapidly found online and where opinions about the answer can be discussed with numberless other people. There have also been huge changes in the ways in which teachers and learners interact, and in how students relate to their learning communities. While face-to-face lectures and tutorial groups persist, much of this interaction is now mediated by an online learning environment, usually hosted by the educational institution (and provided at great expense by a technology company). Access to education has been transformed through exclusively online courses and MOOCs, with their challenge to existing economic models of learning and teaching, while attending students can now access online resources (including "flipped lectures" and "lecture capture"). Thus electronic communication is becoming an ever more important component of the student learning and teaching experience.

The doctoral journey is one which now wends its way through a digital landscape, where online reference management software provides the underpinning structure for academic outputs to grow, and where social media platforms bloom to allow sharing of ideas, opinions and results. Communities of practice spring up around methodological areas; demonstrations of research and analytical techniques colonise video platforms. The 'sage on the stage' teacher, trainer or conference presenter comes back to life and freezes under the control of their students. Doctoral study is also mediated through technological affordances which have their own emotional flavour. Immersed in a social media platform, we may detect

the polished sheen of selectively presented academic lives, with successful research and carefree down-time in a virtuous cycle of mutual appreciation. Underneath, we may get glimpses of the Sisyphean, often solitary work involved in doctoral study, the tense relationships and the sacrifices which seem to be demanded of health and well-being in completing the task. Whatever the lived experience of researchers may be, online spaces can be powerful instruments that enable sharing and community support.

2. Case study 1: special interest networks for researchers

2.1 Rationale for special interest networks

We were approached by a postgraduate researcher seeking to access conversations around managing her stressful research topic, and seeking some logistical support to organise a meet up for other researchers in similar situations. Speaking to her, it became immediately clear that she wasn't talking about issues common to all postgraduate researchers, for example the stresses of project management, or of needing help with academic writing or keeping up motivation for doctoral study. The issue she raised was that her research topic itself involved working with sensitive and upsetting materials related to rape narratives. Her work also involved presenting research outcomes on these sensitive issues that others could find inflammatory, and so she had encountered verbal abuse when presenting in person, and also in online spaces. Clearly, a high emotional load was required in considering and navigating such issues which, without regular debriefing, the researcher was experiencing as chronic stress. Although engaging in traumatic or sensitive research themes can be exceptionally rewarding for a researcher, it is important to be mindful of how wellbeing may be affected. Research has shown that exposure to traumatic research without adequate support or coping strategies, may lead to vicarious trauma (O'Halloran and O'Halloran, 2001; Dominey-Howes, 2015). Vicarious trauma is the negative change in our thoughts, perceptions and interpretations of events as a result of repeated engagement with sensitive, traumatic or upsetting materials and experiences (Jenkins and Baird, 2002).

Together with the researcher, we hosted a face-to-face scoping meeting to design the online Emotionally Demanding Research Network, inviting all interested postgraduate and early career researchers across the university. The first meeting was face-to-face in order to facilitate open discussion and to build trust and confidence from the outset. We welcomed 22 people to a series of facilitated discussions where small groups considered: how a researcher's relationship with their research topic and materials can impact on their health and wellbeing; what measures they take, or boundaries they set to mitigate their exposure to the upsetting materials or experiences; and what support, events or conversations they'd like to receive through the network. The results of our first collective mapping of the issues and enablers were written up as a blog post and circulated to all postgraduate researchers for further anonymous input through a Google form, which enable wider access to input into the design of the online Google+ community.

Following this first consultation and design process, we set up a Google+ community space and the new network was announced with around 50 researchers joining in the first few weeks. Key online activities included sharing experiences, resources, and ideas, requesting information, and setting up online chats or smaller face-to-face events.

2.2 The underpinning principles of special interest networks

The popularity of this format meant that two more subsequent special interest networks were created, again due to researcher interest in co-leading a peer support group. The Disabled and Ill Researchers' Network, and the Parent-PGR Network followed the same process of consultation (What are the issues? What works well? What needs to change? How would the ideal network help you?), co-design and online space development. Through each of these three network scoping processes, it was clearly articulated that the resulting communities should have the following underpinning principles:

(1) The community should be accessible and open to all researchers whether they were on campus or remotely located. We seek to be inclusive to people with different mobility and access needs, and to ensure that busy researchers managing different working patterns, family lives and health conditions can enjoy full access to the conversations, support and resources offered through the network. Isolation plays a role in a person becoming overwhelmed by exposure to traumatic materials and so researchers engaged in fieldwork can be particularly vulnerable, being both immersed in their work, and geographically remote from their personal and professional support networks. We pledged to write up blog posts that detailed the discussions and outcomes of any face-to-face sessions, and to develop spaces and resources that could be accessed online.

(2) The community should be responsive at the point of need. Researchers and researcher developers felt that it was important that members should be able to interact with their peers on their own schedule, asking questions and sharing resources as the need or opportunity arises. Due to the organisational integration, and the ability to set private spaces and monitor membership and discussions, we set up a Google+ Community as our primary online space. This, while initially intended as a discussion space, became more of a resource and links repository. To facilitate discussion, and requests for support, an email mailing list was therefore also created for the communities. Members are encouraged to use the lists to, for example, post articles or links, start or respond to discussions, and organise or promote face-to-face events.

(3) The community should be co-led and consultative. To prevent the networks from being just another channel for promoting organisational messages, it was keenly felt that researchers themselves should own the content, and set the tone for each of the networks, and should decide which issues or activities to prioritise. Each network benefits from co-leaders who are researchers, and who interact with the group in order to, for example, consult the members on key issues, or to organise events. The network leads seek support from researcher development staff as needed, and make suggestions or raise issues on behalf of the group. This means that the networks each have their own unique member needs, and their own ways of working, and developers would benefit from avoiding the trap of trying to work with each in precisely the same way, in favour of building control and ownership within the membership.

(4) The community should be strategically driven, and work in partnership with university teams and services. The supporting role of the researcher developer should be strategic, in linking the aims and activities of the network with other important individuals, teams, services, and groups with shared interests or remits — both inside and beyond the

university. Good partnership working can enable researcher groups to seek data, clarify guidance or regulations, press for changes to structural blocks, or to help define or enhance processes that affect them as researchers. It can also facilitate consultation with interested groups of researchers, when universities are seeking to design or reshape programmes or processes. Further, it can help researchers connect to other researchers and opportunities across organisations. The University of Sheffield Emotionally Demanding Research Network works in partnership with the University Counselling Service, and the University Research Ethics and Integrity Team. Our Disabled and Ill Researcher's Network works in partnership with the Disability and Dyslexia Support Service and the Counselling Service. The Parent-PGR Network works in partnership with the University Staff Parents' Network and the Postgraduate Scholarships Officer. The role of the researcher developer is paramount in facilitating this dynamic flow of information and in building strong partnerships.

2.3 Examples of activities and impact from the networks

As discussed above, each of the fledgling networks sets its own priorities and preferred activities. Common to all is the instinct to combine occasional face-to-face activities with online responsive sharing. The pace of working has also differed between the three communities. Now, at the 18-month stage, summaries of each network's key activities and outputs are below:

The Emotionally Demanding Research Network:
Working with the University Counselling Service to design two workshops covering self-care in emotionally demanding research, and strategies for researchers focusing on marginalised experiences. Each was made available in text (blog) format after the face-to-face session. These facilitated sessions complement group debriefing — reflective sessions in which creative methods are employed to help researchers
Collaboration with the University Research Ethics Committee to create a Specialist Research Ethics Guidance Paper (University of Sheffield, 2019a) related to Emotionally Demanding Research. This is designed to help individuals designing research projects to assess the emotional load and risk to the people who will be conducting the research. It is complemented by amendments to the Ethics Application System for all research projects; the 'Risks to the Researcher' section now lists 'emotional load' and 'vicarious trauma' as prompts to the applicant. The group has also suggested wording amendments its to the university's 'Grant Costing Tool' which will enable the risks of emotional load and vicarious trauma to be flagged at an earlier point, when applying for funding.

The Disabled and Ill Researcher's Network:
Collaboration with and sponsorship by the Academic Leads of an institution-wide review of PGR Processes, and PGR Wellbeing, to design an online questionnaire on engagement with Leave of Absence (a period of unpaid leave from study) processes. The anonymised summary data covers reasons for taking an LOA, experiences of taking an LOA, and barriers to taking an LOA, and will feed into process improvement through redesign.
The creation of a series of blog stories, written by members (University of Sheffield, 2019b). This growing resource is a way of sharing experiences, advice, ideas, and guidance, and works to raise the profile and voice of our disabled and ill researchers.
Working with the University Disability and Dyslexia Support Service to inform the design of a new peer mentoring programme for new disabled postgraduate researchers.

The Parent-PGR Network:
Working with the researcher development colleagues to begin to design an online learning resource and workshop for doctoral supervisors, covering how to work with researchers who have children, or who take parental leave during the course of their studies.

2.4 Limitations and considerations for practice

As is noted throughout the online learning literature, online discussion spaces cannot be expected to automatically engage members who do not know each other well (who frequently have not had the opportunity to meet each other in person) in disclosure about their health or concerns. The topics covered in the networks above can be sensitive, and in order to share openly researchers must feel that they are in empathetic company, with people who share their experiences and understanding. It is worth being mindful of the fact that even if facilitators don't see the value to participants demonstrated through the online space, it doesn't mean that value is absent.

The role of facilitator (in this case, a researcher development staff member) is paramount in helping to establish ground rules, and to help participants to feel safe to share, through setting clear expectations, offering guidance, and monitoring online behaviour. We strongly recommend that other institutions seeking to replicate these types of network should assign resource to the groups in the form of a facilitator who is accountable for progress and available to encourage and support busy researchers. The workload is considerable, and we should not rely on the unpaid labour of early career researchers to run such initiatives. Further facilitator duties will include:

- Setting ground rules for confidentiality and behaviour and monitoring the community for signs of distress, conflict, or requests for help. Signposting members in need of help to a support service, or alerting an individual or team at the institution.
- Keeping networks informed of institutional process and policy issues, opportunities, articles and upcoming events;
- Making sure the groups are consulted on issues that affect them and championing their voice to senior leaders in the university and nationally;
- Ensuring that networks are identified in funding allocations and connecting them to other funds sources to support their work;
- Ensuring that mailing lists are up to date, online spaces are facilitated and keeping up momentum by organising events and meetings;
- Making sure that networks are cross-linked to key university support services with shared agendas, connecting us to external groups working on similar issues, and making sure that our voices are heard in national or sector debates and dialogues.

Linking the researcher-led networks to senior partners who champion and sponsor the work (e.g. Heads of Service or Academic Leads) gives any project outcomes or findings an interested and invested audience, which increases accountability for the networks to complete work, and encourages issues to be driven into actions.

3. Case Study 2: the STEP project

3.1 Rationale for the initiative

As discussed, the transition to doctoral study can be problematic, and the early stages of the PhD are often particularly challenging. The possibility of a link between support during transition to postgraduate study and outcomes (including retention and mental health) for doctoral researchers, led us to design a way to enable postgraduate researchers to reflect on their transition. Self-reflection is an important practice in doctoral learning as "[A] process of a continual internal dialogue and critical self-evaluation of researcher's positionality as well as active acknowledgement and explicit recognition that this position may affect the research process and outcome" (Berger, 2013, p.220). Self-reflection also has therapeutic value wherein externalising a problem (e.g. through reflective writing) can relieve distress. Indeed, significant subjective and objective health improvements have been reported when individuals write or talk about personally upsetting experiences (Pennebaker & Chung, 2011). Given that writing is the medium through which the doctoral degree is assessed, and that writing is also a success measure in research careers, it seemed important to offer researchers a different medium through which to personally reflect on and make sense of their experiences, thereby avoiding mental associations between reflection and judgement. A growing acceptance that creative expression can be beneficial for mental health and well-being (Clift, 2012) and healthy human development (Heenan, 2006), led us to favour a creative approach. Researchers' familiarity and high engagement with social media (sharing image-based stories to represent their daily activities or emotional states), and the increasing accessibility of digital photography, led us to choose smartphone photographs as our mode of reflection, adapting a photo elicitation approach (Harper, 2002). Creative use of photography for therapeutic benefit is not without precedent; expression through photography has been shown to facilitate empowerment (Teti et al, 2016; Mizock et al, 2015; Wang & Burris, 1994) and self-reflection (Breen, 2006; Mizock et al, 2015; Teti et al, 2016; Wang & Burris, 1994), enabling participants to process trauma (Teti et al, 2016) and better understand how their emotions were influenced by the world around them (Lane, 2015).

To facilitate a sense of belonging in scholarly communities and to help PGRs to overcome experiences of isolation, we designed the pilot initiative as a series of face-to-face and online group activities. Returning to our intention to separate reflective and judgemental learning experiences, we used a cross-disciplinary peer group approach rather than anchoring the idea within supervisory relationships. Indeed, the relationship with the supervisor may, in itself, be a factor in researchers experiencing the transition as problematic, and supervisors naturally differ in the extent to which they recognise, empathise with and respond to the confusion experienced during doctoral transitions.

3.2 Learning design

For the 'Student Transitions through Engaging with Photography' (STEP) pilot project, first year (6-month stage) doctoral researchers were invited to attend two face-to-face workshops to learn the skills of reflection and photography, and between workshops, to take and share a series of photographs representing their early doctoral experiences. The two workshops were facilitated by the lead authors and a professional photographer (who was also engaged in PhD research at a separate institution).

In workshop one, the rationale and framework for the project was introduced, the ideas of reflection and sensemaking were discussed in the context of the doctorate, and participating researchers (19 people) were provided with introductory practical skills in capturing images through digital (phone or camera) photography. The workshop included time to put learning into practice, taking photos on the topic of 'transitions' and sharing those photos in a pop-up gallery, discussing each in turn as a whole group. In the final part of the workshop a Padlet board was demonstrated (www.padlet.com) and researchers were invited to join the board, choose pseudonyms, and to share and annotate their photos (Figure 1). A number of considerations were applied to the Padlet design concerning board privacy, participant anonymity, group size, whether liking and commenting should be enabled, and whether the facilitators commenting could be conflated with 'assessment'.

The second workshop was four weeks later, and between the two workshops, participants were set the task of taking and sharing one photograph each on the theme of 'In Between'. This was intended to relate to the core theme of Transitions, signifying the 'in between' time when one is not sure what has started and what has ended (Bridges, 2003). As facilitators, we modelled reflective commenting on participants' shared photos, and invited them to do the same. All 19 participants engaged with the online photo-sharing task.

Ten of the original group attended workshop two, in which participants learned about the relationship between images and text, and that choosing a title and caption was a reflective act. To promote creativity, they used both freewriting, and text cutting techniques to title and caption their photographs. The chosen photo titles were both literal and metaphorical, and reflected doctoral practicalities and priorities; transitional themes concerning unknowns, uncertainties and concerns; and community and relational themes. The Padlet board remained in place post-workshops, with all participants indicating their intention to continue to share, caption and comment on photographs.
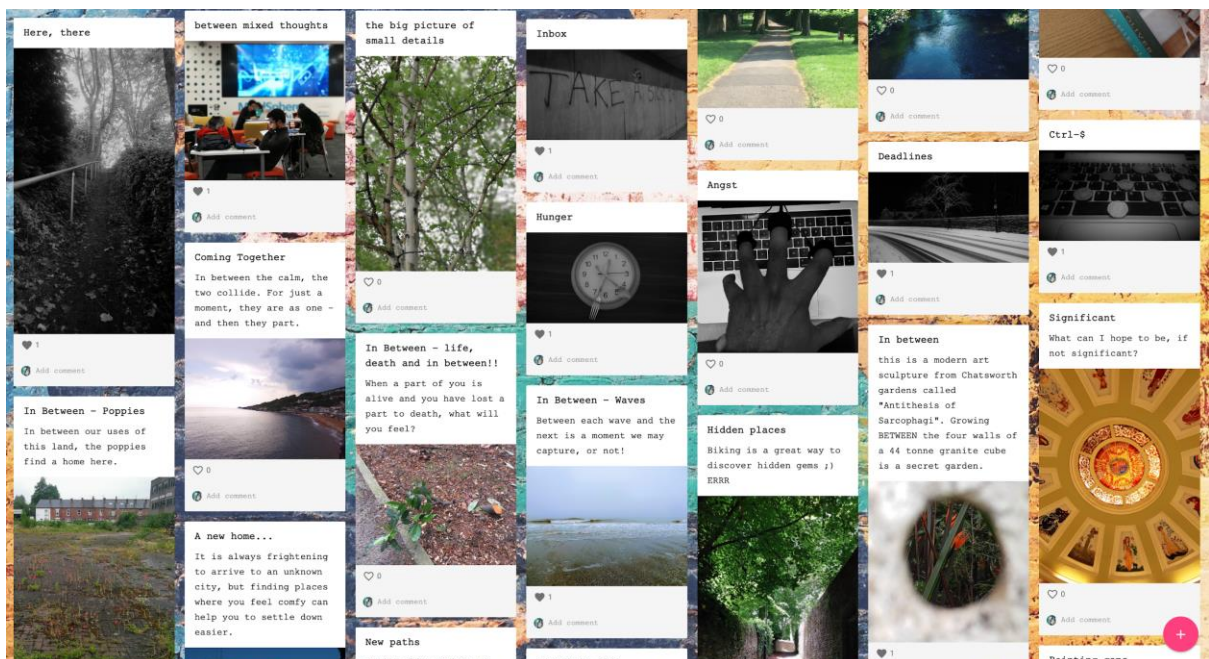

Figure 1 - The STEP Padlet board

3.3 Outcomes of the pilot project

In total, the Padlet board gained 48 photo posts on the two set themes, with researchers who participated indicating informally that they had gained new skills and understanding, and would continue to use reflective photo-taking and photo-sharing as a transitioning tool. To gain a deeper understanding of the postgraduate researcher experience and the role of photo-reflection, all researchers who attended one or both workshops were invited to be interviewed by the research team which comprised the two facilitators (academic researchers) and 4 medical undergraduate students undertaking a research placement. Six postgraduate researcher participants agreed to take part in semi-structured interviews which allowed for a flexible approach in collecting the data while enabling the researchers to address a clear set of concepts (Denscombe 2007, p. 176). Audio recordings were transcribed for qualitative thematic analysis to identify both commonalities and individual differences in experience (Braun and Clarke, 2006).

3.4 Evaluating photography as a means for doctoral self-reflection

Most interviewees reported that creating, captioning and sharing photos helped them to make sense of their doctoral transitions. Some favoured other methods of self-expression such as drawing or journaling, but none rejected photography as an option. The main concern participants held was that they were 'too practical' or 'not artistic enough' to use this format effectively. One participant didn't think that photography helped them personally, but felt that participation in the workshops prompted them to find other more pragmatic forms of reflection. Participants valued the opportunity to join an online space, through the Padlet board, and to share their resources openly. They responded positively to the use of monthly themes for photography, rather than an open brief.
Three main areas of reflective change were identified from the data, with researchers who participated reporting that they had increased their awareness of, or taken action to resolve issues of:

(1) Belonging to a researcher community: Four of the six participants interviewed discussed their feelings of isolation and loneliness, and all participants talked about the importance of community during the study process. The STEP project was found to have reduced feelings of loneliness by providing opportunities to connect with doctoral researchers outside disciplinary networks using the virtual community of the Padlet page. In keeping with the idea of image-based rather than verbal or written reflection, the online environment was set up as a reflective gallery, rather than a space for dialogue. However, at participants' request, we enabled functionality allowing them to comment on, or 'like' one anothers' photographs. We as moderators, modelled good practice in commenting and responding to comments. Participants valued the variety of responses to their own contributions, which ranged from technical issues to academic questions and emotional responses.

(2) Alleviating stress in the early stages of the doctorate: Several participants reported feelings of stress and pressure during their doctorate, with one person actively seeking specialist counselling support. The STEP project was reported to provide time away from the pressures of doctoral study, where the researchers could relax, have time to think, share experiences and support each other to bring about some change.

(3) Awareness of organisational services that support mental health: All participants mentioned learning about a variety of other institutional support services and teams, with varying opinions being expressed about how useful, appropriate and accessible these were for different people and different challenges. None of the participants had utilized these institutional support services, but all thought that knowing about the range of support services was a positive gain from the project. A project like STEP could provide a feed-in route to specialist services.

3.5 Limitations and considerations for practice

Although this was a single cohort, with a limited number of interviews, and an attenuated time-span, the results nevertheless suggest that doctoral researchers do find the transition to postgraduate research study difficult, and that there is value in offering them a creative opportunity to reflect on their own early experiences of the doctorate, and to share that with peers. Sustained engagement requires formal facilitation and we suggest that six monthly photo-themes be developed and participants should be encouraged to engage along the course of the initiative, from the 6-12 month period. We also recommend partitioning the cohort into small groups to aid navigation of the Padlet resource.

Participants found benefit in both the self-reflection through creative activity and in the connections with others that stemmed from sharing common experience. The creation of online or webinar versions of the face-to-face workshops is essential to enable the most isolated researchers to engage with the initiative. Our pilot project did not include supervisor input, though participants were encouraged to share a version of their reflections with their supervisors. To maximise transitional learning, and drive action, new knowledge and understanding gained through the six-month programme could feed into the review at the end of the first year,and enhance process-driven reporting experiences.

Despite the many commonalities that doctoral researchers have as a group, there is great variation in their experience, skills, interests and in their transitional learning. Universities must therefore ensure that the range of support services are accessible to and relevant to research student groups, not appended onto systems created to mesh with undergraduate experiences.

Whilst a creative approach such as photography used in the STEP project may not be suited to all PGRs, resources which are tailored specifically to doctoral researchers are reported to be of great value to them. This evaluation suggests that photography for reflection could be a valuable tool for doctoral researchers as they chart their own progress through their doctoral studies.

3.5 Conclusion

The experience of transitioning to, and managing the constraints and challenges of PGR study is a demanding one. It can also be a solitary one, which - without opportunities for reflection, dialogue and sense-making - can have significant impacts on the well-being of students. The case studies presented here show that community building technologies and online environments can be used to create and support new networks and enable peers to connect with one another, and this can be a meaningful source of support for the users. For

these networks to flourish, care has to be taken in how they are set up and facilitated, with adequate sustained support for building links to functions across the institution. We must also be vigilant in ensuring online communities are accessible, welcoming and useful spaces which facilitate authentic dialogues and which do not replicate unhelpful power dynamics, demand unpaid emotional work, or contribute to the social isolation which may be present elsewhere in the PGR journey.

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