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'PGR Connections': Using an online peer- learning pedagogy to support doctoral researchers

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ABSTRACT

Peer learning is defined as a reciprocal learning relationship among peers for their mutual benefit. This form of learning is now commonly used at undergraduate level within Higher Education internationally. However, less is known about how peer learning pedagogies can support the education and development of doctoral researchers. Initial evidence suggests that peers can help build a 'researcher' identity through social interactions where perspectives and experiences are shared. This study adds to these initial findings by exploring the benefits of an online peer learning scheme for postgraduate research students in a Scottish university. Results from this study suggest that peer learning pedagogies can help to develop a sense of community, enable honest conversations, boost motivation and provide a forum where postgraduate research students can learn from the experiences of others. These benefits emphasise the need to reconceptualise postgraduate research as a less solitary and isolating process by recognising the potential of peer-support and peer-learning pedagogies.

Introduction

Peer-led learning (PLL) is defined as 'the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions' (Topping & Ehly, 1998, p. 1). There is a considerable amount of literature detailing the benefits of PLL pedagogical approaches in undergraduate higher education. However, the utilisation of PLL pedagogies in doctoral training remains an under-researched area (Cusick et al., 2015). Flores-Scott and Nerad (2012, p. 73) suggest that the 'apprenticeship model' of doctoral education, in which the supervisor is viewed as the key source of students' learning, may have an impact on this, since the importance of relationships and interactions with peers, academics, and the wider doctoral community is overlooked in that model.

In contrast to taught programmes, where students learn alongside their peers in instructed classes, doctoral education demands extensive independent effort due to its distinctive structure. Postgraduate research students (PGRs) frequently endure 'social

isolation, a lack of emotional support, and may struggle to engage in meaningful relationships with their peers (Janta et al., 2014, p. 565). Loneliness among research students has been commonly reported (see, Ali & Kohun, 2006; Ali et al., 2007; Cantor, 2020; Wisker et al., 2007). Furthermore, social isolation has been identified as one of the primary contributors for the intention to discontinue the PhD programme (Castelló et al., 2017) while peer support is regarded as critical for the successful completion of a PhD (Gardner, 2009, 2010; Littlefield et al., 2015; McCray & Joseph-Richard, 2020).

The COVID-19 pandemic, consequent lockdowns, and the sudden shift to online learning exacerbated the problem of social isolation among doctoral students (Covington & Jordan, 2022). Supervisory meetings were held online, and doctoral students had to swiftly acclimate to the new mode of learning. Studies on doctoral supervision during COVID-19 reported students missing out on social learning typically gained during informal interactions (Covington & Jordan, 2022) and desiring the collegial environment while learning remotely (Andal & Wu, 2021; Stevens et al., 2021). This unprecedented situation presented, therefore, an opportunity to explore the implementation of online PLL in the context of doctoral research, thus making an important and timely contribution to the literature on peer networks and learning in the context of PhDs.

Peer-led learning in the context of doctoral education

The notion of social learning in PhD education has gained popularity in recent years, and informal interactions with peers and academics have started to be regarded as valuable sources of learning and development for doctoral researchers (Elliot et al., 2020; Flores-Scott & Nerad, 2012; Hunt & Swallow, 2014; Lahenius, 2012; Powers & Swick, 2012). Elliot et al. (2020, p. 11) recently argued that 'informal interactions' among doctorate candidates should be regarded as 'mini-learning opportunities' that can contribute significantly to the creation of a robust doctoral community that can provide 'academic, emotional, social, and psychological' support for its members. Previous research has established the relevance of doctoral researchers connecting with 'practising researchers' and having access to peer networks facilitated by communities of practice (Pearson & Brew, 2002; Pearson, 1999, p. 282). Access to learning communities as well as interpersonal interactions during the doctoral journey have been regarded as effective in helping students not only in their development (Wisker et al., 2003) but also in feeling part of a wider community and mitigating feelings of social isolation (Shacham & Od-Cohen, 2009). While the role of the supervisor is essential for PGRs to have a productive PhD experience and develop into independent researchers, PGRs may still feel isolated in the absence of encouraging communities of practice created by a collegial atmosphere (Wisker et al., 2007).

Peer learning at the PhD level is characterised by reciprocity and horizontalisation (Boud & Lee, 2005). Boud and Lee (2005) contend that 'peer learning, appropriately theorised and situated within a notion of communities of research practice, might be a productive frame through which to view research education' (p. 501). This calls for a shift from provision to pedagogy in doctoral education where peer learning becomes an integral component of the research environment (Boud & Lee, 2005).

Nevertheless, there is limited evidence of PLL implementation at the doctoral level (see, Deakin et al., 2012; Meschitti, 2018). While there is some evidence of the benefits of cohort-based pedagogies and group supervision approaches, this is somewhat limited to

professional doctorate education (Fenge, 2010; Stracke, 2010; Wisker et al., 2007). In short, there remains a lack of conceptualisation of collaborative forms of learning in doctoral education (Meschitti, 2018).

To contribute to this gap in the literature, this study investigated the implementation of an online PLL network for PGRs and how the initiative provided academic, emotional, and social support to the students. The contributions of this study are twofold: first, it adds to the emergent body of literature on doctoral pedagogies by illustrating the positive impact of peer support and PLL for PGRs and second, it offers an overview and recommendations to others considering implementing similar initiatives at the postgraduate research level.

Methodology

The aim of this research was to explore the implementation and potential benefits of an online PLL network titled 'PGR Connections' that launched in the summer of 2020 during the height of the national lockdown in a Scottish University. The purpose of setting up 'PGR Connections' was to provide a sense of community and offer academic, emotional and social support to PGRs by providing them an opportunity to interact with their peers from different campuses and schools. The project was designed to use a synchronous online PLL experience facilitated through the virtual platform, Microsoft Teams. The project was funded through the University's internal Vice-Chancellor's Innovation Fund, and full ethical approval for the study was granted by the school's ethics committee.

This study was rooted in a Social Constructionist (SC) epistemology. SC posits that 'social phenomena and their meanings are continually being accomplished by social actors' (Bryman, 2012, p. 29). According to this perspective, the meaning of our social actions is constructed through our everyday interactions (Khan & MacEachen, 2021). Taken together, this implies that knowledge is 'not only produced by social interaction' also but in 'a constant state of revision' (Wilson, 2022, p. 78). A SC epistemological approach was adopted as the study sought to explore how *knowledge* about PLL and the PGR experience more generally is produced by shared discourses created *by* PGR students. The focus was, therefore, on *experiences* of PLL schemes, rather than uncovering an 'objective', overarching 'truth' about the effectiveness of PLL schemes. With this in mind, this study adopted a qualitative methodology, consisting of focus groups and participant observation. The interview guide used a semi-structured approach and was informed by a detailed literature review on PLL pedagogies. It consisted of questions inquiring the reason behind attending the PLL session, expectations from the session, the uniqueness of the sessions compared to academic-led sessions, benefits of joining the sessions, any dislike towards the sessions and suggestions to improve the sessions.

The PGR Connections project

The first stage of this project was the recruitment of volunteer doctoral researchers to lead PGR Connections sessions. Recruitment was done in a quasi-formal application process consisting of a written application, followed up with a supplementary informal interview as required. Candidate selection was informed by enthusiasm for the role and knowledge of PLL pedagogies. A total of five PGR Connections leaders were selected, although one

leader decided to step down after initial training was complete. A cross-institutional model was encouraged by targeting doctoral researchers from different academic disciplines across the University. The aim, here, was to foster a 'researcher community' by giving PGR students a platform to share experiences on issues related to the research process itself, as opposed to more discipline-specific topics, and to provide reciprocal peer support during a challenging time due to the coronavirus pandemic.

Evaluation

The project was evaluated utilising both focus groups and participant observation of two pilot PLL sessions. A total of three focus groups were held, two during the pilot and one afterwards, to understand the experience of both PLL participants and PLL learners. Attendance at focus groups was mixed, with six, three and four participants attending focus groups. Focus groups were appropriate for this research as an effective and well-established qualitative research method for gaining group insight (see, Breen, 2006; Bryman, 2012).

In addition to focus groups, participant observation was also carried out by a doctoral researcher, who was employed on the project as a research assistant. For DeWalt and DeWalt (2002), participant observation is the process whereby researchers learn about the activities of people under study in their 'natural' setting through observing and participating in those activities. Participant observation was appropriate for this research insofar as it allowed practical, 'real-time' observations to be made, as opposed to relying on a purely retrospective account – as has typically been the case in research on PLL.

Analysis was carried out using Braun and Clarke's (Braun & Clarke, 2006) six-step framework for thematic analysis. This involved identifying common patterns and themes in accounts in the data set (Guest et al., 2012). The first step was to collect and organise the data – this involved collecting fieldnotes from observations and producing verbatim transcripts of focus groups. Both focus group transcripts and observation field notes were collated and loaded into NVIVO for analysis. The second step was to identify the key themes that were immediately apparent to the researchers. For example, it was immediately clear that there was a significant amount of data on 'boosting motivation' or 'being part of a community'. These were used to generate the initial codes that were used for further analysis. In the third stage, the initial codes were further refined into key themes. This involved (re)examining, refining and defining the initial codes into potential themes. The fourth step was to review the potential themes identified in step three and eliminate superfluous themes – for example, a theme that lacks supporting data. The fifth stage was to define and name each theme. The final stage was to write up and present themes, which, as such, are presented throughout this article.

Results and discussion

The remainder of this article will present the results from the observation of two PLL sessions, as well as the conduct of focus groups with PGR Connections participants. To begin, we explore attendance, engagement and profile of attendees. Building on this, we then present the observations made by the observing doctoral researcher at the sessions. Finally, we present key themes that emerged from focus groups. In doing so, we add to

the existing literature on PLL by demonstrating that there are clear benefits to increased peer interactions at the PGR level. This suggests, in line with Boud and Lee (2005), that there is a need to (re)conceptualise PGR education as a less solitary and isolating process.

Facilitating PGR Connections: Attendance, topic and engagement

To begin, two pilot PGR Connections sessions took place during the summer of 2020 and six sessions took place afterwards in 2021/22. The topics covered were *not* discipline-specific. Rather, they aimed to focus on issues that all doctoral researchers encountered, such as experiences of online doctoral supervision during the pandemic, developing 'more efficient' time management techniques, writing a research proposal and conducting a literature review.

These sessions were attended by students from a plurality of disciplines, levels and modes of study. It should be noted that attendance improved since the initial pilot period, which suggests that PLL initiatives need time to develop and establish themselves with student communities to be fully successful (Capstick et al., 2004). The majority of participants were international students, something that was reflected in the profile of PGR Connections leaders. While it is beyond the remit of this article to speculate on the disparity between domestic and international student attendance, it is worthwhile situating this within the broader literature on inclusion in PLL. One of the key benefits of holding sessions remotely is the ability to transcend the spatial boundaries of the campus (Huijser et al., 2008; Malliris, 2012). Notwithstanding the (im)possibility of campus access due to the pandemic, this is reflected in attendance at PGR Connections sessions, with participants joining remotely from diverse locations, which crossed continental boundaries. Additionally, this reflects, at the surface level at least, the broad literature on the benefits of PLL in supporting cultural transition (Byl et al., 2016; Devine & Jolly, 2011; Mann et al., 2010).

Observation of PGR Connections sessions

This section presents the findings from peer observation of PLL sessions. Current literature is largely reliant on retrospective individual accounts of experiences of PLL sessions via qualitative (interview or focus groups) or quantitative (survey) data. This represents somewhat of a gap insofar as first-hand, primary accounts of PLL sessions are limited. As a result, it is often difficult to assess both benefits and problems that can arise during PLL sessions.

Our main observation was that a focus in the project brief, and training provided, on peer-learning may have contributed to a sense of formality to both sessions. More specifically, PGR Connections leaders had a tendency to 'lead' discussions, with a focus on 'telling' or advising participants as opposed to fostering an environment in which participants were encouraged to share experiences. However, the extent to which this emerges from participant reluctance to speak as opposed to overly-dominant facilitation techniques remains unclear.

This does not imply that PGR Connections sessions were entirely top-down, nor to suggest that facilitators should not *lead* sessions. Rather, observations (included particularly from the second session onwards) suggest that well-designed activities can help

keep participants engaged as the session develops (particularly in an online context). In this context, activities such as quizzes helped engage participants by supplementing the broader discussion with an active and reflexive activity.

Focus groups with PLL participants

In this section, we present the findings from three focus groups with PGR Connections participants.

Theme one: Becoming part of a community

PLL schemes are often said to develop a 'sense of community' providing a more horizontal space for peers to engage with each other (See, Watts et al., 2015). This is, perhaps, particularly true in the case of doctoral research, which is often believed to be an isolating and arduous process of individual research (Meschitti, 2018) (Stracke, 2010). This is certainly reflected in the findings from focus groups. To begin, there was a sense of apprehension and disconnection from other students:

> Yeah, because of this pandemic, we became isolated ... So yeah, for me it's like kind of difficult that I cannot connect with other students, I cannot talk to people as much as I want, and yeah, but attending this meeting or this focus group reminded me that I am not alone. (P3, FG2)

> I was a bit apprehensive at first because I wasn't sure what I was coming into exactly, and not knowing as many of the PhD students as what I would've liked to have known ... I wasn't really a part of anything, or felt was a part of anything, so that session there really did show me that we can connect quite well (P1, FG2)

It seems, particularly true in the case of 'international students' and those most spatially disconnected from campus:

> this is a very fresh start for me [laughs], and it's a very difficult start because I, yeah, I'm still in my country, I'm still in Indonesia so I haven't got a chance for any face-to-face meeting or any kind of induction (P3, FG2)

This echoes previous research into PLL in remote settings. For example, Beaumont et al. (2012, p. 21) argue that 'discussion has intensified about the potential for online PASS (peer-led study sessions) to support students who find it difficult to attend campus and to engage with a seemingly ever-more digitally connected student body'. Additionally, there is an increasing awareness of PLL in supporting transition for international students by fostering a sense of community (Zaccagnini & Verenikina, 2013). More broadly, this reflects both the dominant construction of doctoral education as individual research as opposed to collaborative learning outlined by Boud and Lee (2005) and how peer-learning might be poised to challenge this model.

> I agree with the online format because we have a different campuses so it, it helps us to connect with the different schools and different campus based PhD students. Definitely and it will get more access to PCR (P2, FG3).

When taken together, it is clear that building a sense of connection between doctoral researchers via PLL emerges as a finding from this research. This 'sense of community' and 'researcher identity', cultivated through PLL, reflects less of a peer-learning activity

(insofar as participants were not on a set 'learning activity') and more of a community of practice in which students support each other within a more horizontal cohort setting (Boud & Lee, 2005: Wisker et al., 2007).

Theme two: Enabling honest conversations

Closely related to the 'sense of community' fostered by PLL sessions was a sense that the relative informality of meeting in a peer-group setting enabled more honest conversations to take place:

> It felt more at ease to be able to discuss how you're feeling as opposed to when you're in a supervisory meeting discussing how wonderful you are and [laughs] . . . just the honesty in the room was really good (P1, FG2)

Additionally, this appears to be linked to fostering an 'open', 'informal' and 'friendly' environment that enables students to become comfortable sharing their views and experiences in a supportive environment:

> This is like a friendly platform where you get to be at ease when we discuss our ideas and share our experiences (P4, FG1)

> These sessions are more comfortable and more interactive and also definitely personal, so you feel more comfortable in sharing your thoughts and asking more questions. It's not like hierarchical if you say teacher-led sessions (P4, FG3).

This reflects what appears to be a growing consensus about the type of environment (physical or otherwise) that PLL schemes should strive to achieve. To return to Cusick et al. (2015), in research education, PLL schemes can help develop a 'researcher identity' and cultivate a 'research community' by providing a platform for peers to come together and share experiences. Keenan (2014) argues that there is evidence to suggest that PLL pedagogies can improve academic confidence, thereby promoting greater social integration and enabling participation in academic communities.

Theme three: Boosting motivation

A number of students reported an increase in their personal motivation after attending PLL sessions. This is particularly relevant to the second PLL session, which focused on providing students with a chance to share experiences on 'fighting procrastination'. Perhaps unsurprisingly, therefore, a theme from PLL focus groups was around 'boosting motivation':

> It was quite revealing to see that I was actually in the majority, that a lot of other students have that feeling of procrastination . . . it gave me a bit of a boost. And I got some writing done at the end of last week (P1, FG2)

However, 'boosting motivation' was also a theme in focus groups held after other PLL sessions:

> It's just I've decided to join in because just of some of the points that people raised earlier on about not feeling motivated and it's been really difficult to try and resume your kind of thinking, so I decided to join this to try and help me remotivate myself back into, reintroducing myself back into being a student again. (P1, FG1)

> I decided to join this PLLs session because I wanted to get back on track and be engaged with the other, the other fellow students and be more, and to gain back my motivation (P2, FG1)

The motivation that is perceived to be derived from interacting with peers in a less formal environment was a motivating factor for students when deciding to attend a PLL session. Boosting motivation, it seems, is implicated in a broader discourse of reducing isolation by fostering peer-to-peer interaction (Fenge, 2012; Stracke, 2010; Wisker et al., 2007).

Theme four: Learning from the experience of peers

PLL gave students a forum to learn about the viewpoints and experiences of their peers, which helped them prepare for the next phases of their PhD. Peers' experiences were valuable to students, particularly if peers were further along in their PhD degree. For doctoral researchers, informal interactions with peers are a valuable source of learning and development (Elliot et al., 2020; Hunt & Swallow, 2014), and it is clear that PLL can offer a medium for such conversations and discussions.

> I'm still in Indonesia so I haven't got a chance for any face to face meeting or any kind of induction, and all of, suddenly I just, yeah, come up with this idea that I want to meet a lot of people in different kind of workshops, so maybe I have this kind of preconception about how to start the PhD and what difficulties or shortcomings and how to overcome, so it gives me a glimpse of what will, what kind of experience that I will have in doing my PhD journey (P3, FG1).

> My basic purpose to participate was to connect with the other PGRs and learn how they defend their thesis in viva. This session was really helpful for us to prepare for viva, although it's still far, but I can start preparing from now so that I perform effectively (P2, FG3).

Peer networks can not only assist in the development of PGRs but also help in feeling part of a wider community (Cusick et al., 2015), which mitigates feeling of loneliness (Shacham & Od-Cohen, 2009). It is evident from the responses that participants were able to get guidance and support by joining PLL.

Conclusion

In this article, we have contributed to the emergent scholarship exploring the implementation of peer-led pedagogies in the context of postgraduate research education. In doing so, we have demonstrated that there is clear evidence of the benefits of peer interactions among PGR students – (re)emphasising the need to reconceptualise postgraduate research as a less solitary and isolating process by recognising the potential of peer-support and peer-learning pedagogies. Evidence from the 'PGR Connections' project suggests that PLL can help to develop a sense of community, enable honest conversations, boost student motivation, and help participants to learn from the experiences of their peers. However, there are also some limitations to this study – which focused on PGR experiences of PLL, as opposed to a broader evaluation of PLL effectiveness. Additionally, the PGR Connections project also identified challenges when implementing PLL at postgraduate research level. The decision to assign some students the role of facilitator responsible for organising and facilitating PGR Connections sessions contributed to a power differential with the facilitators, in effect, occupying the role traditionally occupied by lecturers or tutors. Although this still allowed for honest conversations to take place, it suggests the need to consider further ways of

implementing collaborative forms of learning at the postgraduate research level. Future PLL projects would benefit from clearer guidelines on the ethos of PLL and how this translates into practice.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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