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Multidisciplinary Peer-Mentoring Groups Supporting Knowledge Sharing in Doctoral Education

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ABSTRACT

Obtaining a doctoral degree requires acquisition of different types of skills and knowledge. The aim of this article is to explore multidisciplinary peer-mentoring groups (PMGs) facilitated by senior academics as a knowledge sharing practice in doctoral education. Drawing from interviews with participants of PMGs at a Finnish university, we found that the participants perceived that cultures and practices of doctoral education in departments and faculties, as well as limited support from supervisors might hinder knowledge sharing. They highlighted that a flat hierarchy and confidential atmosphere supported by the multidisciplinary group composition promoted knowledge sharing and emotional support. Based on these results, we argue that PMGs are a useful resource for facilitating knowledge sharing amongst doctoral researchers and thus have a capacity to benefit the individual as well as the organisation as a whole.

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Doctoral researchers, as novices of the academic community, face many challenges in terms of accessing and contributing to knowledge embedded in that community (Pifer & Baker, 2016). The challenges are particularly numerous for those doctoral researchers who do not work in research groups or physically on a campus (Naidoo, 2015; Naylor et al., 2018). Furthermore, if a doctoral researcher is female, of non-majority ethnicity or race, or a part-time or international student, or does not have a stable employment contract, they may be in disadvantage when pursuing their doctoral degree (Aarnikoivu et al., 2019; Cai et al., 2019; Williams et al., 2018; Zahl, 2015).

One option for additional, informal support on the doctoral path can be offered by peers (Meschitti, 2019; Wegener et al., 2016), and cultivating collegiality is generally considered an important part of doctoral education (Brown, 2019). While not typically part of doctoral curricula (Elliot et al., 2016b; Scott & Miller, 2017), also mentoring may support the wellbeing (for examples, see Lorenzetti et al., 2019) and retention of doctoral researchers (Brill et al., 2014), as well as the establishment of and success on a research career (Curtin et al., 2016). Most mentoring research, however, focuses on discipline or faculty-specific mentoring, and little research exists on multidisciplinary peer-mentoring groups (PMGs) which combine both the peer support and the support offered by experienced scholars (Aarnikoivu et al., 2020). As multidisciplinary collaboration is increasingly encouraged both inside and outside academia and can support exposure to different

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perspectives and disciplinary cultures early on (c.f. Henrich & Attebury, 2010), it is important to explore the opportunities awarded by multidisciplinary peer mentoring. While literature on peer mentoring, discussed below, recognises many different definitions of peer mentoring and different compositions of participants, our article addresses multidisciplinary groups of doctoral researchers facilitated by pairs of senior academics working as a team, and based on voluntary participation of both doctoral researchers and of the facilitators.

The aim of this article is to explore multidisciplinary peer-mentoring groups (PMGs) facilitated by senior academics as a knowledge sharing practice in doctoral education. More specifically, we investigate the challenges related to knowledge sharing in doctoral education and inquire whether PMGs can support knowledge sharing by enabling doctoral researchers and established scholars to discuss and mutually reflect upon their experiences in low hierarchy settings. We begin by contextualising our article in terms of research on peer mentoring and knowledge sharing in universities as well as introducing the peer-mentoring pilot this article is based on. We then present our empirical data and the analysis methods we used, after which we report the results. Finally, we will discuss peer mentoring as a novel arena for knowledge sharing and conclude our findings.

Peer Mentoring in Universities

Mentoring is a common practice in socialising students, researchers, and early-career professionals both in academia (Asgari & Carter, 2016; Curtin et al., 2016; Driscoll et al., 2009) and other professional communities (e.g., Eriksson, 2017; Pennanen et al., 2020; Zhang et al., 2016). While mentoring is often organised as one-on-one or a dyad of a senior mentor and a junior mentee, it can also be organised in group constellations – as peer mentoring, group mentoring, or collaborative mentoring (Asgari & Carter, 2016; Kroll, 2016) and may also take place among junior scholars without senior mentors (Gregoric & Wilson, 2012). Mentoring organised in peer groups emphasises professional (Fleming et al., 2015) and emotional (Scott & Miller, 2017) support offered by peers and the benefits of being able to reflect on one's own experiences (Skaniakos & Piirainen, 2019) in a safe and supportive environment (Griffin et al., 2015; Turner et al., 2012). For example, students participating in peer mentoring programmes have been argued to display higher levels of integration into academia (Collings et al., 2014) and perform better in their studies than non-participating students (Leidenfrost et al., 2014). Previous research conducted among peer-mentoring groups of pre-service and in-service teachers notes that PMGs foster collegial relationships and integration of theoretical and practical knowledge by bringing together mixed groups of individuals (Korhonen et al., 2017). They can also facilitate the adoption of good practices, such as ethical conduct in research (Löfström & Pyhältö, 2020) Thus, PMGs may be especially valuable to doctoral researchers.

Mentors coming from varied specialisation areas in research and practice can be an asset with their differing knowledge and experience (see e.g., Carter-Veale et al., 2016 on mentoring for dissertation writing, and Freel et al., 2017 on mentoring grant applications). Similarly, it can be beneficial to have people from different career stages come together as peers (Bristol et al., 2014), as they add rich perspectives in mentoring (Bagaka's et al., 2015). Non-hierarchical discussions taking place in peer communities are important, as dialogue facilitates the shared process through which learning (Meschitti, 2019) and professional identity (Monk & McKay, 2017) can emerge. The mentors or coordinators of mentoring groups hold considerable role in creating a safe space for participants to share their experiences, as well as contributing to an emergence of a constructive atmosphere in mentoring groups (Griffin et al., 2015; Turner et al., 2012). Confidentiality, voluntary participation, and rapport between group members (Darwin & Palmer, 2009) are similarly important preconditions of successful PMGs. Creating informal physical meeting spaces for PMG sessions can facilitate successful experiences, but technological and social networking applications can also be used as alternative resources (Yusta-Loyo et al., 2015).

Knowledge Sharing in Universities

Sharing explicit and tacit (Gourlay, 2006; Nonaka, 1994) knowledge contributes to innovation, organisational learning, and performance in knowledge intensive organisations in general (Ganguly et al., 2019) and higher education institutions in particular (Charband & Jafari Navimipour, 2018). Universities are at an advantage in effectively sharing knowledge within and across different communities; as – in Buckley and Du Toit’s (2010, p. 493) words – “each staff member is a knowledge worker whose mission is to transmit, create and incorporate new knowledge to the existing knowledge”. Knowledge sharing is facilitated by close interaction (Nonaka, 1994; van der Hoorn & Whitty, 2019), trust (Fleig-Palmer & Schoorman, 2011), knowledge reciprocity, social capital (Ganguly et al., 2019) and sense of community (Nistor et al., 2015). Yet universities often face challenges in knowledge sharing (Stover, 2004). Institutional culture (Chugh, 2015), the role of leadership (Dee & Leisyte, 2017), and forums that enable collaboration (Charband & Jafari Navimipour, 2018) are crucial in fostering knowledge sharing in universities. Conversely, knowledge sharing may be hindered by the individualistic or even proprietary culture of doing research (Brown, 2019) or by the lack of explicit knowledge sharing forums and practices (Stover, 2004). Individuals may be motivated to share knowledge with their colleagues to gain some personal benefit, such as extending their relationship with their colleagues. This, in turn, may lead to improved opportunities for career advancement (Fullwood et al., 2013). Individuals may conversely hesitate to share knowledge for the fear of losing their jobs or for the fear of benefitting rivals (Charband & Jafari Navimipour, 2018). This hesitation happens despite effective knowledge sharing having been linked to psychological empowerment (Feiz et al., 2019) and job satisfaction of academics (Rafique & Mahmood, 2018), as well as to student learning (Sein-Echaluze et al., 2016).

Looking at the context of this paper specifically, as the individual motivations for pursuing doctoral education vary, as does the individual background of doctoral researchers, they also have different needs for knowledge sharing (Aarnikoivu, 2020a), and therefore there is no single solution that would suit everyone. There are, of course, many arenas for sharing knowledge and support in doctoral education; from supervision (Bastalich, 2017), to seminars (Dinkelmann et al., 2012; Gregory et al., 2017) to informal cultural or interest-based communities (Cai et al., 2019) or online communities (Ferguson & Wheat, 2015). Mentoring and peer mentoring have similarly been explored as an arena for sharing knowledge, experiences and support (for an overview, see Lorenzetti et al., 2019). In addition, the importance of multidisciplinary knowledge sharing has been highlighted by for example Boden et al. (2011), and Geschwind and Melin (2016). We were, however, unable to find much research on multidisciplinary peer-mentoring groups as a knowledge sharing arena. Some notable exceptions do exist, such as the study by Ferguson and Wheat (2015), which explored Twitter as an arena of knowledge sharing community building among early-career researchers, and the study by Gregoric and Wilson (2012), which described an informal peer mentoring relationship of doctoral researchers as a means to collaboratively develop generic research skills. Kensington-Miller (2018), who studied multidisciplinary peer mentoring of early-career academics, noted the importance of multidisciplinary: “In particular, working collaboratively away from their disciplines provided space to learn about institutional and departmental expectations, but more importantly the opportunity to discuss difficult issues that often arise for new academics in a supportive environment.” (Kensington-Miller, 2018, p. 678).

In this paper, we provide a perspective, which also takes the career stage into account (c.f. Laenius, 2012). Our interest lies in multidisciplinary peer-mentoring across different career stages where academics come together as peers in low hierarchy settings. Recognising from the interviews conducted with PMG participants that sharing knowledge is crucial, yet often overlooked practice in doctoral education (Elliot et al., 2016a; Elliot et al., 2016b), we explore how the participants taking part in multidisciplinary PMGs perceive the groups supporting knowledge sharing.

Data and Methods

Empirical Context: The Peer-mentoring Pilot and its Participants

During the academic year 2017–2018, the University of Jyväskylä piloted a peer-group mentoring scheme (later: peer-mentoring pilot) comprising two facilitated, multidisciplinary peer groups. The university is a mid-sized multidisciplinary research university, hosting approximately 14,000 students (10 percent of which are doctoral researchers) and 2,500 staff members in six faculties and four independent institutes. The pilot was initiated by Terhi Nokkala and Johanna Kiili as a spin-off of their university pedagogical studies. It engaged altogether 13 participants (see [Table 1](#)):

The coordinators were established academics from three different faculties, who were recruited in the spring 2017 before the start of the pilot. Coordinators were then asked to invite doctoral researchers to the groups. It was required, however, that any of the coordinators and doctoral researchers did not have a supervisor–supervisee relationship between them, nor work in the same research group. This lack of vertical power relations was intended to facilitate emergence of trust, collegiality and sense of community conducive of knowledge sharing (c.f. Nistor et al., 2015; Storey & Richard, 2015). Similarly, the decision to call participants *peers* and *coordinators* stemmed from the wish to avoid possible hierarchical connotations linked to the concepts of *mentees* and *mentors*, and to emphasise the non-hierarchical nature of the groups.

The peer-mentoring pilot was guided by the following principles: multidisciplinary, voluntariness, and the self-directedness of the groups. The PMGs did not receive much instruction in terms of how the group meetings should be organised, merely that the discussions should be conducted in open, constructive and collegial atmosphere (Bristol et al., 2014; Brown, 2019) and that participants should aim for confidentiality and reciprocity, and dialogue (c.f. Atjonen, 2012; Thomas et al., 2015). The informal atmosphere of the meetings was created by serving coffee and snacks, and through allowing the discussion to meander freely according to the participants' interests; unguided by us as the organisers of the pilot. The groups discussed supervision, writing and publishing, funding applications, mobility and internationalisation, academic work and skills, career planning, differences in disciplinary practices, tacit knowledge, peer support, academic freedom and responsibility, for example. The full timeline of the pilot is illustrated in [Table 2](#):

Data Generation

This article is based on three rounds of interviews with all the peer mentoring pilot participants. The participants were told that taking part in the interviews was voluntary and that it was possible for them to participate in the peer mentoring pilot activity only, without participating in the interviews, or that they could choose to opt out of the interviews as well as of the pilot at any stage. All pilot participants chose to be interviewed, and everyone continued to do so all the way through. The pilot participants, upon their agreeing to be interviewed, received written information about the study and their rights as interviewees, and were asked to sign a research consent form.

Table 1. Composition of the PMGs.

Group	Coordinators (established academics)	Peers (doctoral researchers)
Group 1	Sari, Faculty of Mathematics and Science	Nelli, Faculty of Education and Psychology Jenna, Faculty of Mathematics and Science
	Amalia, Humanities and Social Sciences	Severi, Faculty of Mathematics and Science Heidi, Faculty of Humanities and Social Sciences Marjaana, Faculty of Humanities and Social Sciences
Group 2	Timo, Faculty of Sports and Health Sciences	Kati, Faculty of Mathematics and Science Reetta, Faculty of Mathematics and Science
	Elisa, Faculty of Mathematics and Science	Mari, Faculty of Sports and Health Sciences Johannes, Faculty of Sports and Health Sciences

Table 2. Timeline of the pilot.

Time	Activity / event
Spring 2017	Recruiting the coordinators (4 in total) by using the authors' personal networks; followed by the coordinators recruiting the doctoral researchers through their own networks.
September 2017	Official start of the pilot (a joint meeting with all 13 participants and Nokkala And Kiili) to discuss and agree on shared principles for the pilot and the PMG meetings
September / October 2017	The 1st PMG meetings
November / December 2017	The 2nd PMG meetings
December 2017	Nokkala and Kiili and the coordinators: discussing the autumn semester.
January / February 2018	The 3rd PMG meetings
April / May 2018	The 4th PMG meetings
May 2018	A shared final meeting with all participants discussing the experiences of the participants from the pilot

The peer mentoring pilot originally had a very practical aim: to find out if multidisciplinary peer-mentoring groups, comprising doctoral researcher peers and senior coordinators from multiple disciplines, would be useful for the participants and especially for the scholarly growth of the doctoral researchers (see also Aarnikoivu et al., 2020). We also wanted to know how such practice could be improved for future purposes. Thus, our own position is not that of a disengaged observer of events happening around them. In generating data for the practical purpose of developing PMG activity, we repeatedly noticed that the questions of sharing knowledge, practices and experiences had been salient discussion topics for the PMGs. This led us to focus our gaze on questions of knowledge sharing. In this approach, we find support from Franz (2011) and Aarnikoivu's (2020b) argument that narrowing the focus of research very early on may lead the researcher to disregard what would turn out to be the most interesting phenomena. Instead, being open to "unfocus" (Franz, 2011, p. 1380) as those tangential questions that are not necessarily at the core of a given data collection may turn the researcher's attention to something more essential than one's original idea.

To generate data, we carried out three rounds of semi-structured interviews with each pilot participant over the course of one year. Thus, our data presents an evolution of the participants' experiences over the course of the peer-mentoring pilot, rather than a snapshot of a single moment. The interview questions are presented in Appendix 1. The practical origins of the peer-mentoring pilot project meant that the interviews included a wide variety of practical and theoretical questions. The first interview round included background questions on the participants' study or work situation, prior mentoring experiences and thoughts about academic community and support structures for doctoral researchers. The second round addressed questions about the practicalities of the meetings, the topics that were addressed, and the impact of the meetings. The last round addressed overall assessment of the pilot, and whether participating in the pilot had changed the participants' thoughts about work and academic community. The participants were also asked what the pilot had given them regarding the discussed themes such as researcher's skills, academic work, career planning, multidisciplinary, tacit knowledge, peerness, peer support, academic freedom and responsibility. Some of the themes addressed in the last interview round arose from the shared final meeting. The knowledge gained in the previous rounds was taken into account in designing the interview questions for the succeeding rounds, thus providing an opportunity for data triangulation.

The interviews lasted between 30 minutes and 1 hour 30 minutes. Most of them were face-to-face interviews, except for two that were conducted via Skype and WhatsApp. All the interviews were recorded and transcribed. The data was collected, anonymised, and stored following the research ethical guidelines of the University of Jyväskylä (2021).

Data Analysis

As explicated in the introduction, this article aims to explore multidisciplinary PMGs as a knowledge sharing practice in doctoral education. To do this, we were interested in two questions specifically, which were not addressed in previous research literature:

- (1) Which challenges do participants of a multidisciplinary PMGs identify related to knowledge sharing practices in the university?
- (2) How do participants perceive PMGs to benefit them as a knowledge sharing practice?

To ensure that we would be able to find what was truly important in the data, we all read the interview transcripts a few times before engaging in the analysis. While one of us, Melina Aarnikoivu, was responsible for the coding of the data, we all discussed the themes arising from the data together several times. To answer the research questions, we used a two-stage analysis process and Atlas.ti version 8. In the first stage, we narrowed down the transcribed data of nearly 40 hours of interviews by locating those interview excerpts where the participants discussed knowledge or knowledge sharing in any way. While different definitions abound, in this study we used the concepts “knowledge” and “tacit knowledge” in an everyday sense and were interested in the perceptions of our participants. In this, we were inspired by Davenport and Prusak’s (1998) definition of knowledge as

a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms. (p. 5)

Therefore, we view “sharing experiences” as a knowledge sharing activity, for it is discussed together in a group setting and it includes “framed experiences, values, contextual information, and expert insights” (c.f. Davenport & Prusak, 1998, p. 5).

After having identified all the excerpts related to knowledge sharing practices in the first analysis stage, in the second stage we grouped all these excerpts into two main themes by using inductive, qualitative content analysis (Blackstone, 2012). The first group consisted of issues the participants identified as problematic (supervision and cultures and practices of doctoral education) and the second group of issues which they considered beneficial (multidisciplinary composition and low hierarchy of the PMGs). We have used direct quotations of to illustrate our findings and enable the reader to assess the trustworthiness and credibility of our interpretation. We use pseudonyms for our interviewees.

Results

Perceived Problems of Knowledge Sharing Practices in University

Our first research question was linked to the problems that the PMG participants identified in university’s knowledge sharing practices. These can be summarised under two themes: the limited support from supervisors, and the cultures and practices of doctoral education in different disciplines and faculties. In addition to describing these problems, the participants also described their participation in the peer mentoring pilot as being motivated by the desire to solve some of the problems, either for themselves, or – in the case of some of the coordinators – for their own supervision.

The first prevalent issue related to the first theme was supervision; something that had motivated the participants of the PMGs to take part in the pilot in the first place. Participants argued that problematic supervisory relationships, such as doctoral researchers not feeling they can ask their supervisor for help, might disadvantage them in the long term in academic work that relies on support from senior scholars. Moreover, the participants thought that their doctoral supervision did not

necessarily address the questions that doctoral researchers consider important; research funding, publishing processes, or teaching methods; or that supervisors' capacity to answer some of their questions varied.

On a university-level I feel we work quite alone; there aren't many shared activities, although I'm not sure if there should be. In our faculty [...] we have discussed that there would be some help offered for funding applications [in the future] because right now it's very supervisor-led but the level of supervisors varies a lot. Some are very good at applying for money, some are not. So it'd be nice to hear from those who are good at getting major funding. (Johannes, doctoral researcher, 1st interview round).

Similarly, the participants noted that a supervisor may not have much knowledge on careers outside academia in case they had always worked at the university.

The second issue that the participants considered problematic were different types of departmental or faculty cultures and practices in doctoral education. Some PMG participants mentioned that there was an atmosphere in their departments which discourages people from asking "stupid questions", meaning something they felt was "embarrassing" to bring up, or something they "should have already known" as doctoral researchers. While the university offers some courses for doctoral researchers, some of the participants voiced concerns about the quality of the courses. Officially, faculty-wide doctoral schools existed already during the time of data generation, but some participants felt that the practices were not yet established, so that the doctoral schools would properly support sharing of good practices.

The participants argued that the university – some departments particularly – were currently not offering any type of venue or support for knowledge sharing purposes. Chance encounters and informal channels, such as coffee break conversations, were sometimes perceived effective for transmitting information, but the participants argued that it would be beneficial to have also other, more structured avenues available for knowledge sharing. It is perhaps for this reason that many participants talked about the importance of having a proper orientation at the beginning of doctoral studies, as well as considering the individual needs of a researcher. The lack of orientation to doctoral studies was perceived to potentially have a severe effect on one's motivation as well, as one of the participants described:

The beginning [of my PhD] was totally chaotic. (...) I was very enthusiastic but no one gave me any instructions, or provided any form of orientation, so my enthusiasm died very early on. No one even introduced me to anyone, they only showed me my work station. I had no idea about the bigger picture of my work, no one giving me any support, so that was a big challenge. (Heidi, doctoral researcher, 1st interview round)

The coordinators shared many of the views of doctoral researchers. One of the coordinators, Timo, for example thought new doctoral researchers would greatly benefit if they were given a "start package" about "what doctoral researchers really do" when they begin with their postgraduate studies. Without such a package or introduction, he argued, doctoral researchers are solely dependent on their supervisors. And akin to doctoral researchers mentioning knowledge sharing as a primary motivator to participate, the same applied to the coordinators:

Tacit knowledge was one of the reasons I wanted to participate [in the PMGs]. For example, how to publish for the first time as a doctoral student. The knowledge is already there and many people have experience on it but it is tacit because it is not talked about a lot [...] So these groups make that knowledge from tacit to explicit. The learning process becomes quicker. (Timo, coordinator, 3rd interview round)

Coordinators were particularly keen to develop the current practices of doctoral education and offer their support for younger researchers. They reported that having such a group when they were doctoral researchers would have been extremely helpful. Similarly, they wanted to update some "old-fashioned pedagogies" and to test how such a group would work on improving some current practices that were seen to include a significant tacit element, such as the publication process and analysis methods.

The Benefits of Pmgs as a Knowledge Sharing Practice

Our second research question addressed the ways in which the participants perceived multidisciplinary PMGs benefitted them as a knowledge sharing practice. The participants' perceptions can be summarised under two themes. The first theme illuminates the benefits of knowledge sharing in PMGs for the participants, while the second highlights multidisciplinary composition and low hierarchy setting of the groups as the preconditions from which those benefits arise.

The Benefits of Knowledge Sharing in Pmgs in General

Offering a forum that enables sharing tacit knowledge as well as experiences was one of the explicit aims of the pilot. Tacit knowledge was therefore also addressed in the interviews; and one can critically ask if the implicit aim of the pilot produced expected results. However, the participants argued strongly that transforming tacit knowledge into explicit and shareable knowledge would benefit both individual doctoral researchers and the academic community as a whole. While few argued tacit knowledge to be specific to department or discipline and thus impossible to share in a multidisciplinary group, most participants considered that sharing all the gained multidisciplinary knowledge is tacit knowledge. For instance, comparing departmental practices regarding access to information was seen as the kind of tacit knowledge sharing that took place in the groups. Similarly, the extent to which hearing other people's experiences was perceived as "sharing knowledge" or simply as sharing experiences varied. For example, one of the doctoral researchers, Marjaana, perceived sharing knowledge as comprising all kinds of practices and experiences you cannot write down, as well as issues that researchers [in the university] know and share with colleagues: "if someone has invented the wheel, not everyone needs to reinvent it."

Besides information and knowledge, the sharing in PMGs was seen to contribute also to the feeling of social and emotional support for the participants, who stated that realising that many other participants had similar experiences and self-doubt, and that there were no "stupid questions" in the groups was valuable to them. Finding shared interests and topics, they argued, helped the participants realise that there are specific things in academic work that all researchers share. Being able to discuss the similar experiences and share knowledge on how to navigate the academic environment was considered beneficial for one's well-being and the improvement of researcher growth and skills.

If you think about the entire university and people's well-being, this [sharing tacit knowledge and participating in the PMGs] probably increases it, as long as it is not too time-consuming for them. It might help in researcher growth, and of course it would be good for the university too, that the students graduate, so if this supports that, then that is nice. (Reetta, doctoral researcher, 3rd interview round)

Multidisciplinarity and Flat Hierarchy as Preconditions

The participants came from four different faculties and they formed two multidisciplinary peer-groups, in which each group comprised participants from at least two different faculties. This was considered a highly positive factor, as the participants felt it allowed them to share knowledge and experiences that they would not normally acquire within their own discipline. Some participants expressed that they had gained "insight", "perspective", or "understanding", rather than "knowledge", though pieces of knowledge might have emerged in the discussions. In some cases, multidisciplinarity was argued not to be able to bring out some discipline specific information, but most participants agreed that sharing experiences contributed to achieving one of the most important takeaways from the pilot, namely "out of the box"-thinking.

If you think about those who just started with their PhD, it would be important to find out about different practices in different disciplines. It might help you understand the practices in your own field as well. For example, in terms of supervision there were huge differences between students coming from different

disciplines, so it's also about the administrative culture, how you perceive pedagogical work, and how you perceive supervision. (Amalia, coordinator, 3rd interview round)

Hearing how things are done in other disciplines was perceived by both doctoral researchers and coordinators, to enable them to understand and critically reflect on and question various processes and practices in their own field.

Flat hierarchy and encouraging atmosphere of the groups were considered conducive to discussing thornier issues encountered in the academic community. The ease of talking about complicated issues related to hierarchies, power, and fairness, or keeping up appearances in academic work was seen to be facilitated also by the candid engagement of the coordinators, whose willingness to share their own failures and misgivings was appreciated by many doctoral researcher participants:

The coordinators were great. They let us know if we had a right to demand something, as they knew more about departmental practices, for example about negotiating the authors and author order of an article. (...) So, getting back-up for situations when you feel you have been treated unfairly. (...) So we discussed these hierarchy-related issues quite a bit. (Nelli, doctoral researcher, 3rd interview round)

The coordinators also felt they benefited from the flat hierarchy of the PMGs. For example, one of the coordinators, Timo, described a situation where he had been considering enrolling in a degree programme in a new field: In his department, he had encountered doubt, whereas in the PMGs he had been encouraged and supported.

Multidisciplinary composition and low hierarchy of the groups were felt to enable confidential sharing of experiences and emotional support. The participants especially valued the groups' supportive and emancipative nature, reciprocal and confidential atmosphere, and free flowing discussion. This sentiment, shared by many participants, can be summed up with the help of the following quote:

I think the groups had a very good, trustworthy atmosphere that people could actually say aloud quite personal things as well. Both, us students and the mentors. Something you wouldn't say in a seminar room when you have fifty pairs of eyes and ears watching and listening. (Kati, doctoral researcher, 3rd interview round)

Kati also argued that, as a confidential environment, the PGM allowed individuals to also share work-related personal matters. She further considered that, at best, such forums increase work motivation, which in turn benefits academia, as "university consists of people".

Discussion: Peer Mentoring as a Novel Arena for Knowledge Sharing

In organisations, such as universities, knowledge is often embedded in norms, routines and practices, and in the "minds of knowers" (Davenport & Prusak, 1998, p. 5). Researchers studying doctoral researchers' wellbeing and quality of doctoral education have reported that in addition to funding, supervision, and personal motivation, for example, also departmental support and socialisation are important (Lahenius, 2012; Levecque et al., 2017). Considering the results presented above, our research supports the previous findings (Lahenius, 2012) that assistance provided by faculties and departments may be necessary for doctoral students to develop peer networks and to enable doctoral researchers to better connect with the academic community. Discussion and reflection together with other academics about practices in different disciplines or faculties helped the participants to make sense of their own position and work within the wider academic space (c.f. Brown, 2019; Meschitti, 2019), in which previous research has acknowledged the need for forums that enable collaboration and foster knowledge sharing (Charband & Jafari Navimipour, 2018; Stover, 2004).

Doctoral researchers and established scholars coming together in PMGs also highlighted the similarities of researchers' experiences regardless of the disciplinary background or career stage (Bristol et al., 2014), while different perspectives also enabled the participants to see the different ways of doing things in different settings and to question the practices in their department or with their own supervisors. This, in turn, was recognised to potentially benefit both the individual

researchers through improved researcher skills, and the academic community as an entity. Peer mentoring meetings did not appear to function as “bulletin boards”. Instead, they seemed to provide a safe space (Griffin et al., 2015; Turner et al., 2012) for the participants to exercise active agency and share experiences as well as practical and reflexive knowledge (c.f. Allas et al., 2017; Asher & Popper, 2019), helping them to understand what specific issues mean when contextualised in their own discipline.

The two key organising principles of the peer mentoring groups – the flat hierarchy and multidisciplinary nature of the PMGs – were perceived important by the participants, as they contributed to alleviating the conventional power relations that are prevalent in academia (Robertson, 2017). The satisfaction with the multidisciplinary nature of the PMGs expressed by the participants supports the findings of Korhonen et al. (2017) and Bagaka’s et al. (2015) on the benefits of mixed groups of people coming together in mentoring. The reciprocity experienced in the PMGs, as discussed by the participants, also enabled the coordinators to receive, not merely give, social support (c.f. Kalpazidou Schmidt & Faber, 2016). In the demanding academic context, the need for emotional support for the choices one has made is apparent not only among doctoral researchers and young scholars (Pyhältö et al., 2017) but also among more established scholars, who similarly feel the need to account for their choices in the increasingly competitive environment (c.f. Bloch, 2012). For them having arenas on which to reflect upon their choices and have those choices perceived as meaningful is equally important.

The small scale study design, and the selection of the participants being based on the networks of the authors and the coordinators, and interested in group-based peer mentoring, are undeniably some of the limitations of this study. Moreover, most coordinators and doctoral researchers were female, the groups comprised few participants from international backgrounds, and many of the profession-based fields such as medicine and engineering were missing. Finally, the data were generated at a single university in Finland. While the interviews indicate that the doctoral researchers felt participating in peer mentoring was advantageous for them in their doctoral work, further research would be needed to find out whether the participants gained any such knowledge that had long-term practical impact on their lives after completing their doctoral degrees. The organisational (c.f. Storey & Richard, 2015), rather than individual, benefits arising from the collegiality (c.f. Brown, 2019) in the peer-mentoring context also merit further investigation. As formal mentoring of doctoral researchers in dyad or peer constellations has only recently emerged as an activity in many Finnish universities, it has not been possible to collect a broad dataset from different universities in the country, and institutional and disciplinary differences remain an area to be explored by future research.

Conclusions

In this article, we have demonstrated that multidisciplinary peer-mentoring activity can provide an arena for academics, both juniors and seniors, to share knowledge in a mutually supportive environment. This article contributes to the discussion on knowledge sharing in universities by illuminating its challenges especially from the perspective of doctoral researchers as the novices of the academic community. We suggest that, by offering an arena for sharing experiences and discussing practices in different organisational and disciplinary contexts in a low-hierarchy settings, PMGs can both invite and enable participants to think reflexively about their own practices and ways of working (Skaniakos & Piirainen, 2019), including enabling coordinators to change the way they supervise their own doctoral researchers. This way the effects of peer mentoring can spread beyond the immediate group of participants. Organising PMGs show the ability of the university to recognise some of the organisational sore points regarding supervisory practices and knowledge sharing, and willingness to offer solutions to those identified problems. Increased reflexivity in individual behaviour and amongst communities of peers and colleagues, and a better understanding among

participants of the structures in play at higher education facilitated by PMGs might potentially also benefit the organisation at large (Aarnikoivu et al., 2020; Kalpazidou Schmidt & Faber, 2016).

There is, indeed, a growing interest towards mentoring and peer-mentoring, and, for example, University of Jyväskylä has continued the PMG programme in the academic year 2020-2021. It seems necessary, thus, for universities to take seriously the questions of providing arenas for knowledge sharing to facilitate integration and wellbeing of its doctoral researchers and established scholars alike. This article has shown that multidisciplinary peer-mentoring groups may offer one useful tool for universities to do that. We hope that it inspires future practice.

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