

PEER REFLECTION ON INCLUSIVE SUPERVISION – A STUDY CIRCLE AS A SPACE FOR COLLEGIAL LEARNING

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SAMMANFATTNING

Forskarhandledare har en viktig roll för att öka genusmedvetenheten inom akademien, särskilt bland unga forskare, och för att stödja en inkluderande och genusvänlig arbetsmiljö för doktorander. Trots detta ges det sällan utrymme för en kontinuerlig reflektion kring inkluderande forskarhandledning. I artikeln beskrivs hur kollegial reflektion kring inkluderande forskarhandledning har möjliggjorts genom en studiecirkel som har arrangerats inom ramen för det europeiska jämställdhetsprojektet FESTA (Female Empowerment in Science and Technology Academia) vid Uppsala universitet. Artikelförfattarna har deltagit i studiecirkeln i rollerna som cirkelledare och kursdeltagare, och artikeln är skriven utifrån dessa perspektiv. I artikeln presenteras studiecirkeln upplägg och pedagogiska struktur samt författarnas reflektioner utifrån deras två olika perspektiv. Både våra egna reflektioner och kursvärderingen pekar på att studiecirkeln har lämpat sig väl som arena för kollegial reflektion. Artikeln avslutas med några råd för de som vill arrangera liknande studiecirkel kring inkluderande handledning.

Keywords: Reflection on Practice, Doctoral Supervision, Inclusive Supervision, Peer Reflection, Collegial Learning, Study Circle

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INTRODUCTION

During the last few decades, doctoral education in Sweden as well as in a wider European context has changed fundamentally. According to a recent report by the European University Association (EUA), there has been a mindshift from a traditional apprenticeship model to the perception of doctoral education as an institutional responsibility. This has led to a call for supportive institutional frameworks as well as for the professional development of supervisors (Byrne, Jørgensen & Loukkola, 2013). One of the most noticeable trends in many European countries has been the growing number of doctoral students and a more diverse student group in terms of – amongst other things – gender and international background.¹ The more heterogeneous student body places greater demands on supervisors in terms of how to respond to students' needs and to support their learning in the best way. Some of the literature for supervisors has addressed these challenges and made suggestions how to handle problems in the supervisory relationship (for example Ryan, 2005; Handal & Lauvås, 2008). Meanwhile, there is also a more critical discussion about the limitations of managerial and mainly instrumental approaches. For instance, Manathunga argues that there is a strong need for supervisors' self-reflection and willingness to scrutinize their own power positions and personal values. The ability to shift perspective is vital in order to reach a deeper understanding and to learn from each other (Manathunga, 2011).

As Spiller, Byrnes and Bruce Ferguson point out, one way to address the complexity of supervision is to create a framework for collegial reflection based on the supervisors' own experiences and practices (Spiller, Byrnes, Bruce Ferguson, 2013). In accordance with their concept of "collaborative conversational inquiry", this article explores how collegial reflection on inclusive supervision was realized within a study circle for supervisors, which was arranged at the Faculty of Science and Technology at Uppsala University. We argue that the study circle is a format that enhances collegial reflection in a fruitful way by offering a small-scale, flexible, non-hierarchical and situated learning environment. Based on a strong democratic tradition, the study circle establishes an atmosphere of mutual trust which allows the participants to question their own beliefs and values and to investigate complex supervisory issues from different perspectives. Thus, the format of the study circle might complement regular training schemes for supervisors, particularly when reflecting on sensitive topics such as identity, gender and diversity, which involve participants not only as academics, but as whole individuals.

The authors of this article were both involved in the study circle, taking the different roles of course facilitator and course participant: Ulrike Schnaas, academic developer at the central Unit for Academic Teaching and Learning, was the study circle leader; Åsa Cajander, supervisor, teacher and researcher at the Department of Information Technology, was one of a total of eight participants. We use a mixed perspective approach where the study circle leader contributes with her previous experience on supervisory training programs, particularly on gender issues (Schnaas, 2011; Schnaas, 2014), and the workshop participant with her perspective as a doctoral supervisor and researcher in computer science and human-computer in-

teraction. Our intention is to give a reflection on practice based on our experiences and insights during the study circle. An analysis of our individual experiences was mainly made through our collegial discussion while working with the article, as well as through the writing process itself, a method presented by for example Wolcott (2008).

As a point of departure, the article introduces the context for the study circle within the framework of FESTA, a European gender equality project, followed by a brief discussion of some obstacles for collegial reflection on doctoral supervision. The main part of the paper presents our arguments for the study circle as a suitable pedagogical format for collegial reflection as well as our reflective narratives through the lenses of facilitator and participant. Finally, we summarize what we learned in our roles as academic developer and supervisor and give some recommendations how collegial learning as a reflection tool on inclusive supervisory practices might be used in other contexts.

A FRAMEWORK FOR INCLUSIVE SUPERVISION

Why do academic institutions lose women researchers after the doctoral level, especially within the disciplines of science, technology, engineering, and mathematics (STEM)? What efforts would have to be made in order to generate a more just and gender-friendly working environment? These are questions addressed by FESTA (Female Empowerment in Science and Technology Academia), a gender equality project funded by the European Union. The overall aim of the project is to improve the working environment of researchers within STEM in order to encourage women scientists to stay and advance in academia.ⁱⁱ Therefore, doctoral supervision is one of its focus areas in order to support the socialization of especially female doctoral students. This goal is to be realized in two steps: firstly, by arranging a series of study circles for supervisors; secondly, by developing a web-based resource for supervisors including various recommendations for good practice. The focus on supervisory practices aligns well with recent recommendations on both national and international level, emphasizing a good supervision experience as key for female candidates' wellbeing and a successful completion of their doctoral education. Thus, a report from the Royal Chemistry Society in the UK states that

... in order for a student to have an overall positive experience of their PhD, it is imperative that he or she has a positive experience of supervision. Supervisors should have access to training to allow them to develop people management skills which incorporate equality and diversity considerations, as benefits their role (Newsome, 2008, p. 8).

Research confirms the need for gender awareness and gender-sensitive supervisory practices by clearly demonstrating that academic culture and norms generally still favor men. Women risk being exposed to hidden or subtle discrimination (Husu, 2005) caused by gender stereotypes and structures that limit their professional development and academic careers (Moss-Racusin, Dovidio, Brescoll, Graham & Handelsman, 2012; Peixoto, 2014; Leslie, Cimpian, Meyer & Freeland, 2015). The-

refore, the need for role models and support for younger women within STEM has been addressed by prominent researchers (e.g. Robinson, 2011) as well as by institutions.ⁱⁱⁱ Regarding doctoral education, studies into students' learning experience show that female students are less satisfied with their supervisory relationship compared to men, experience less institutional support and encouragement and do not feel as included as their male peers within the academic culture at their departments (Björnermark, Kettis-Lindblom & Wolters, 2008; Jacobsson & Gillström, 2008; Holmström, 2013; Charpentier Ljungqvist, 2014). This is even clearer within the STEM area, since some of its disciplines are still, particularly after the doctoral level, strongly male-dominated (Lundborg & Schönning, 2007; Newsome, 2008). In spite of profound research on gender in academia in general, there is a great need for research into doctoral supervision specifically linked to gender and gender equality, as Bondestam points out (2010).

While the FESTA project mainly addresses gender equality, the study circle widened its focus to *gender and diversity*, since a considerable proportion of doctoral students as well as supervisors, particularly within STEM, have an international background. One of the underlying ideas was that supervisors have a vital role in raising gender and diversity awareness in academia, especially among young scientists, and in supporting an inclusive and gender-friendly working environment for doctoral candidates. Being a part of the senior faculty, they function as role models and guides who are able to introduce new candidates into the scientific community and support their socialization process. Moreover, they are able to pave the way for institutional changes by adopting inclusive supervisory practices and hereby contributing to a common culture of pastoral care and mutual responsibility. With this in mind, the study circle had a number of overarching goals that describe different facets of an *inclusive supervision approach*: Firstly, to build a knowledge base about gender and diversity within academia in general and STEM in particular. Secondly, to offer an opportunity for self-reflection in order to increase supervisors' self-awareness of their own power position as well as their own values and beliefs. Finally, to enhance the ability of supervisors to choose strategies that support good working conditions for all doctoral candidates, but particularly for female candidates and international students. In this process, collegial reflection was seen as crucial in order to mirror individual experiences, change perspectives and develop ideas for inclusive supervision.

OBSTACLES FOR REFLECTION ON SUPERVISION

How might a learning activity for supervisors at the Faculty of Science and Technology be organized? What obstacles may have to be faced? The format of the study circle was chosen in order to overcome some of the barriers that still make collegial reflection on supervision difficult. At Uppsala University, there is a training program for supervisors, which is mandatory for all new supervisors; a university-wide, voluntary network for more experienced supervisors, as well as a shorter training for supervisors at the Faculty of Science and Technology.^{iv} Despite these institutional efforts, it is still not common to have a regular collegial conver-

sation about supervision focusing on pedagogical issues at the department level. This might be due to a number of reasons:

Involving a minimum of individuals, supervision has traditionally not been considered as a teaching practice but rather as a purely scientific task and a mainly personal relationship (Byrne et.al., 2013). This has not only led to the assumption that good researchers are good supervisors per se, but also been an obstacle for building a *community of practice for supervisors* in order to share experiences and discuss problems and challenges. Thus, most departmental environments, perhaps especially within the area of STEM, lack arenas for continuous collegial reflection. Moreover, seeing supervision exclusively as a personal relationship might even be related to the misconception that supervision is either a matter of mere talent or a skill that might be mostly developed on an individual basis by gaining more and more practical experience during professional life. Besides this lack of arenas for collegial conversation, there are obstacles linked to the overall organizational framework. In general, research is still considered to be more important for scientific promotion and advancement than teaching; hence there are few incentives for the improvement of individual supervision practice. Moreover, the growing demands on researchers to publish and demonstrate scientific excellence during the past few years has led to an increasing time pressure for many academics who constantly have to navigate between research, teaching and administrative tasks. Furthermore, supervision is still not recognized as a pedagogical skill to the same extent as other teaching. While supervision is indeed a part of the promotion to full professor, the assessment is often whether the applicant has had doctoral students who have successfully finished their thesis, without taking the quality of the supervision itself into account. Thus, a framework in order to value and assess doctoral supervision skills has yet to be developed.

In addition to the above, there are specific obstacles impeding reflection on issues such as gender and diversity (Schnaas, 2014). Caused by lack of knowledge or engagement or by resistance to gender equality as such, some people might think that there is no need for reflection. Furthermore, the strong belief in meritocracy – the overall idea that it is possible to assess academic quality in a strictly objective matter and promote those with the best competence – might lead to the fact that biases are blurred or ignored. Additionally, gender and diversity might be perceived as sensitive topics since they can't be limited to one's professional life, but are strongly connected to one's personal values, beliefs and even emotions, which usually are not a part of academic discourse. Likewise, the complexity of gender and diversity allows no simple solutions that many supervisors might search for, as various power structures interact with each other and are often dependent on a specific context. (Wickström, 2011, p. 31) Finally, the fact that there is a considerable number of rules, regulations and policies for the enhancement of gender equality and equal opportunities in Sweden might, ironically, have created an obstacle for the work in these areas. In contrast to their actual intention, these efforts might have caused tiredness and even resistance amongst some academics, since they are perceived as top-down approaches that are not really compatible with the principle of academic collegiality, as for example discussed in Ankarloo & Friberg (2012).

A SPACE FOR PEER REFLECTION AND COLLEGIAL LEARNING – THE FACILITATOR’S PERSPECTIVE

As described above, there are considerable obstacles for reflection on supervision in general and related to gender and diversity in particular. Thus, one aim of the study circle was to create a community of practice by offering an arena for collegial reflection over a more continuous time period. With respect to the institutional context and barriers, it was clear that it would be impossible to make the study circle mandatory since many supervisors would not like to participate due to a lack of time, interest and motivation or institutional incentives. Therefore, the invitation that was sent out to all senior staff at the Faculty emphasizing the unique opportunity for peer learning and professional development.

Eventually, the study circle started with eight participants: five women and three men representing four nationalities and four departments. The group also varied in age, academic position and experience in doctoral supervision: two participants were full professors with considerable supervisory experience, whereas the other group members were either in the beginning or in the middle of their academic career with rather limited supervisory experience. Thus, the group was heterogeneous in terms of supervisory experiences and identities, but at the same time homogenous in terms of a shared interest for the topic. The study circle was arranged during autumn 2014 and spring 2015 including four meetings of two to three hours each in total. Altogether, the workload of the study circle was expected to be equivalent to two days of work including meetings, the preparation of some readings and a short written assignment. In order to be as easily accessible as possible, all meetings took place at one of the Faculty’s campus areas.

Compared with the regular training program for supervisors, the intention was to create a more flexible and situated learning environment that could be easily adapted to the participants’ specific interests and needs. Therefore, the learning goals were formulated in a process-oriented way with a strong focus on dialogue and reflection (see appendix). The format of the study circle, although not very common in higher education, seemed to fit well with the aim to provide a small scale arena for peer reflection on a sensitive topic. As Larsson points out, the Swedish study circles have a history of being a space for “education for and through the people” (Larsson, 2001, p. 207), and many of the characteristics are still the same as when they started in the beginning of the 20th century. Thus, most study circles are distinctly small group activities for participants joining on a voluntary basis. They are typically led by a circle leader, who is not necessarily an expert on the subject matter but rather a facilitator for the participants’ learning and a moderator of discussion. Larsson emphasizes the educational potential of the study circle as “radically different” (Larsson, 2001, p. 211) due to its democratic and non-hierarchical approach: “Compared to other educational arrangements there is reason to believe that study circles create much better conditions for building equal and co-operative relations (Larsson, 2001, p. 203). In accordance with the basic assumption that group members participate out of a personal interest rather than for merit, learning in the study circle did not mean the transmission of knowledge

from teacher to participants, but to explore a topic of shared interest together. The expectation that supervisors' personal motivation would be their main reason for participation was confirmed after the second meeting, when several participants expressed the feeling that two hours was not enough time and made the suggestion to set three hours including lunch time for the following meetings.

Brainstorming on the different roles and responsibilities of the supervisor was a point of departure at the first meeting. During the following meetings, participants shared different incidents covering not only their supervisory practices, but also their experiences as academics in a specific discipline and departmental environment. Among other things, discussion topics included gender stereotypes that might affect female students' self-esteem as well as how they are perceived by others, or how to support students who do not belong to the traditional academic majority in terms of gender, class, ethnicity or color. Other topics dealt with how to encourage students' ability to think independently and how to give critical feedback to students who come from postcolonial countries in a non-mastering, supportive but still honest and constructive way. Topics related to the participants' personal academic lives were, for example, women's experiences in male-dominated fields, the gendered character of scientific fields themselves – as for example computer science or physics – and the use of gendered examples in teaching. As the facilitator, it became obvious to me that it was neither possible nor desirable to reach consensus in every case, rather to try to illuminate topics from as many perspectives as possible.

The main focus of the study circle was to enhance supervisors' skills on inclusive supervision by providing a physical as well as a mental space for peer reflection and collegial learning. Based on my previous experiences as an academic developer, supervisors often have difficulties linking together theory and practice; there seems to be a gap between knowledge about excluding and discriminating norms and practices and how to use this knowledge in supervision. Since several factors such as gender, age, ethnicity or academic position often interact with each other, problematic situations in supervision needed to be analyzed carefully in order to explore different possible appropriate approaches for how to handle these. With regards to Schön's concept of *reflection-on-action* (Schön, 1983), the study circle was a means to step back from everyday practice and get the opportunity to rethink and analyze situations that occur and which might be challenging for the supervisor. Since reflection can hardly be done exclusively on an individual basis, it was also a platform in order to articulate individual thoughts, make them understandable for others and tie together individual experiences with peer reflection. Participants were asked to provide individual reflection tasks before the meetings, which were then brought into the group discussion in order to widen and even question individual perspectives and assumptions. Thus, peer reflection was a means to put words on supervisory practices not normally spoken about – to break the "shroud of silence in which practice is wrapped", as Brookfield puts it (Brookfield, 1999, p. 197).

The study circle's democratic tradition was an important precondition for authentic and honest reflection since it assumes the willingness of the participants to share positive as well as negative experiences and the ability to listen to each other in a non-judging way. As the facilitator, I put great effort into creating a friendly and relaxed learning atmosphere. The introduction during the first meeting was organized in an intentionally informal way in order to encourage the participants to introduce themselves not only with reference to their academic interests and merits, but also as private individuals. Further on, rounds and peer-to-peer conversations in pairs or trios were used in order to support an inclusive and non-hierarchical learning environment. The fact that all meetings included coffee, tea and snacks was appreciated not only for practical reasons, but also as a means for building an informal atmosphere. Accustomed to different routines, participants expressed gratitude for the especially nice refreshments unusual in the academic setting. Even if it was not stated explicitly neither by me nor the participants, it became common practice to listen carefully to each other's opinions and experiences, to make comments without irony or aggressiveness, to share even sensitive or negative experiences with the group and to test also fuzzy ideas with no given answers. Taking the role of a facilitator, it was not always easy to decide to what extent I should control the discussion, for example when to finish a discussion topic and move on to another.

To sum up, the study circle's democratic tradition of encouraging different perspectives, diversity and self-directed learning, where participants are able to choose discussion topics based on their own interests and needs, aligned well with the overall intentions and learning goals. As the study circle proceeded, it became clear to me that the narrative approach of sharing one's own experiences and critical incidents was a powerful tool for reflection, particularly when it came to the participants' own experiences of exclusion and overt or hidden discrimination. The informality and the underlying norm to be kind to each other and listen to each other in a respectful way provided an atmosphere of mutual trust. Thus, the study circle established the "psychological security that will be important for voicing opinions and thus participating in discussions" (Larsson, 2001). Peer reflection within the educational framework of the study circle became a vital means in order to reach "deep and rich understandings" that are crucial for developing supervisors' intercultural skills (Manathunga, 2011, p.15).

PEER LEARNING ABOUT INCLUSIVE DOCTORAL SUPERVISION – A PARTICIPANT'S PERSPECTIVE

I am a researcher in the area of computer science at the Department of Information Technology. The percentage of female doctoral students at my department was 16% in 2015, while the percentage of female students was 22, 5%.^v Information Technology is one of the most male dominated departments at the Faculty, and the percentage of female doctoral students is the lowest of all the sections of the faculty.^{vi} My primary motivation for attending the study circle was to learn more about inclusive supervision, and to improve my supervision skills generally. As

a female supervisor of a male doctoral student in a male dominated area, I had a general interest in reflecting on how this supervision practice is influenced by gender. The study circle surfaced as an opportunity to discuss and reflect on my experiences from a group of doctorate students with different cultural background and gender. My expectations of the study circle were that it would include some relevant readings, as well as discussions of experiences from inclusive supervision and tools for improving supervision practice. Expectations were very much that the study circle would be based on active participation, and not be a classical monologue based course.

It is interesting to note that during the study circle, invisible “gender and inclusive supervision glasses” filtered experiences of everyday academic life for me, and indeed many discussions, situations and papers read outside the study circle suddenly felt related to gender and diversity. Many experiences were actually colored and affected by the discussions and reflections, which made the learning connected to the study circle richer, but also more elusive and difficult to express. The study circle became a vehicle for a wider learning experience than the very content of the discussions of the study circle. This was also affected by the atmosphere of the study circle, as it was much warmer than expected and more open and collegial than any other courses taken at the university. Becoming a tightly coupled group, sharing personal experiences and thoughts was most probably crucial for learning and for motivation, and this also positively affected my learning outside of the study circle, as well as my interest in the discussions of the study circle.

Some of the critical incidents of the participants were really surprising, and resulted in personal reflections about different perspectives and on situations that have occurred previously in our lives. One should note that at the same time as being very personal, the incidents gave us the chance to really discuss the problems with diversity and inclusion on a general level. One critical incident discussed was especially noteworthy, as the emotional strength of it was considerable and it described how gender had played a very explicit and negative role in the long career of one of the attendees. This critical incident has been something to come back to and to reflect on since then, and the learning based on the narrative of this colleague goes way beyond the study circle. Often the critical incidents described were quite complex with numerous possible reasons and explanations for the things that happened. They gave a glimpse of the complexities of gender, culture and norms and discussions were very open, non-judgmental and interpretive to understand the different perspectives and reasons for the critical incident to emerge.

The study circle gave me a deeper understanding of inclusive supervision and the complexities that it incorporates. The things we discussed and learned changed my understanding of situations and made me re-experience incidents. The open-ended questions and assignments given in the study circle as a kind of homework also made me reflect on our work as a supervisor, and how I experience it. Many of the questions were indeed difficult to answer, such as questions related to unspoken social codes and behavior related to gender and diversity or questions related to

advantages and challenges experienced as a supervisor. I remember making mind maps with perceptions of the advantages and challenges of being a supervisor, and trying to pinpoint what they are, and also involving colleagues in my pondering on these issues. One of the things constantly emerging in this was the norms of being a female supervisor, and what is expected of us as women supervisors in relation to our personalities and how these might be different things. This included for example thoughts about scaffolding, and helping too much as a part of the norm “caring”, and to help more than male supervisor colleagues. This is visible in small details such as the response time to an e-mail, and in overarching things such as for example scaffolding in the development or use of theory in research – which is not at always beneficial to the doctoral students and their independence. There is often a risk of being a “curling doctoral supervisor” as in the sport curling, and metaphorically being the one heating up the ice with a broom in preparation for the doctoral student so that the stone will go smoothly and in the right direction. Is this my identity as a supervisor, or is it perhaps me fulfilling what is expected of me as a female doctoral supervisor visible in the norm “caring”? What would happen if I stopped doing this? Based on the fact that gender expectations influence what is considered to be normal behavior for men and women, there is reason to believe that a less active, accessible and caring role would hardly be possible for me as a female supervisor since it would be perceived in a negative way by both students and colleagues.

Some of the changes that I made as a result of the study circle might not be visible to others, such as awareness of norms and gender, whereas other changes are more tangible. One of the changes made was to more actively include the co-supervisors of my doctoral students in the discussions, to make sure that the student would have other perspectives than mine. Also, as a result of the study circle, practical aspects of supervision were discussed with doctoral students, including a revision of the supervision process. This adjustment was more a matter of changing some of the content of the discussions, than it was about adding discussions to the supervision sessions. As a result I also feel more confident in explicitly talking about future careers, and encouraging female doctoral students, as I have understood that this aspect is an important part if we want to keep women in academia.

Finally, it has become clear to me that supervision skills can be seen as a kind of professional skill, of an interpersonal skill character, where the identity as a supervisor, or doctoral student, is formed by the collaboration and the context including norms related to gender and diversity. Since the learning of professional skills is gradual, tacit and unknown to us, one problem with this kind of experience-based skills, as supervisory skills also are, is that they are difficult to pinpoint, and to describe (Cajander et al, 2012). However, it is well-known from research that experienced and reflective practitioners handle new situations better than their inexperienced colleagues. System one thinking, that is based on norms related to for example gender and diversity, as well as personal values and different aspects of our identity, is affected by system two thinking (Kahneman, 2011), where we use energy to reflect on and learn new things. Perhaps the development of supervision

skills is tacit as it becomes an integrated part of our personality and hence belongs to system one but is developed using system two? Indeed research has shown that reflection-on-action, and reflection-in-action are powerful tools for the learning of professional skills (Schön, 1983), and that the time aspect strongly affects the learning outcome. Cultural awareness can be seen as a part of inclusive supervision skills, and this is not often discussed in relation to supervision, even though it exists as a part of the undergraduate education (as discussed in Bernáld, Cajander, Daniels & Laxer, 2011).

CONCLUSION

Much has changed in the higher education sector in recent years, and European government initiatives have placed an increasing focus on the importance of teaching excellence and professionalism at universities (Gunn & Fisk, 2013). In Sweden this trend includes a higher focus on pedagogical competence as well as the introduction of pedagogical career paths such as to be appointed an *excellent teacher* (Ryegård, Apelgren & Olsson, 2010). Although the concept of excellence in supervision has not yet been on the agenda, we believe that it will be an increasing focus in the near future with the upcoming evaluation of doctoral education in Sweden. Hence, based on our positive experiences of the study circle, we want to emphasize that inclusive skills should be considered as a natural and necessary part of the pedagogical competence of supervisors.

In this paper, we have argued that a small-scale, flexible and situated educational format aligns well with the purpose of peer reflection on gender and diversity in supervision. On the one hand, one possible objection might be that the study circle, since it was voluntary, only addressed supervisors who already had an interest in the topic. On the other hand, we believe that it was vital to build an atmosphere of goodwill and mutual trust that would have been much harder to achieve in a mandatory course. The results from a short course evaluation at the end of the study circle confirm our assumptions since participants point out the importance of collegial reflection in a non-hierarchic framework.^{vii} It is obvious that the participants appreciated the atmosphere of the study circle and became a community with a common interest, goal and identity, as Wenger defines a *community of practice* (Wenger, 2000). One of the participants expressed the hope that this community of practice would continue to exist, as is seen in this comment: "I find that we built a nice network during the study circle. I hope that we will continue to have contact from time to time." However, as discussed previously, there are a range of barriers to creating and maintaining these kinds of communities of practice in academia. There is indeed a need to further overcome these obstacles and offer learning opportunities for supervisors based on peer reflection and identity development.

In hindsight there are some aspects of the study circle that could be further improved, and that others could learn from. First of all, it would have been good to be explicit about the roles of facilitator and participants. Since the format is not

common in a higher education context, there is reason to stress that discussion is a shared responsibility since it offers a chance to talk about pressing issues, special interests or topics participants find relevant and urging. This could have been complemented with a more explicit meta-discussion about reflection and learning that could have motivated the participants even more. Moreover, written assignments would have been useful, since the writing process itself is a vehicle for learning and reflection. These could have been in the format of a reflective journal or a blog addressing peer reflection and readings as well as experiences in one's supervision during the period of the study circle. Even a personal learning contract for the participant in the area of inclusive supervision might have been useful as a tool for meta-reflection, as presented in for example Cajander, Daniels & McDermott (2012). Finally, there might have been a more deliberate scaffolding of the newly created community of practice through a discussion about how to continue the collaboration and discussion in the group and how to include other participants. One idea could have been to attend each other's supervisory meetings as observers and to give feedback afterwards, another idea to use social media in order to maintain the network.

Recommendations for others who want to arrange a study circle on inclusive supervision might include:

- Due to institutional barriers as well as the complexity of the topic, participation needs to be voluntary.
- It is preferred to target supervisors within the same disciplinary domain, since it is fruitful to link gender and diversity to a specific disciplinary context.
- Diversity in terms of gender, age and background is desirable since it brings different perspectives into the group; we recommend a small group of eight to ten participants.
- Likewise, a group with mixed supervisory experience is desirable since an exchange between well-experienced and less-experienced supervisors supports fruitful peer reflection.
- The number of meetings can be adapted depending on the interest in the group. We recommend that the time between the first and the last meeting should be one semester or more, since reflection over time is a precondition for the learning process.
- Discuss learning and expectations in the beginning of the study circle.
- Let the subjects and the time planning come from the group itself, with some guidance. Make the group responsible for how time is used.
- Plan for people not attending all meetings, and provide extra opportunities for these participants.
- Theory is needed in order to create common knowledge base, to develop a common language and to link personal experiences to structures and patterns.
- A reunion meeting is recommended in order to maintain the network and enhance the participants' identity development as supervisors.

APPENDIX

The structure for the four meetings was roughly as follows:

- Meeting no 1: get to know each other, explore the different roles of the supervisor and start a discussion about gender and diversity based on selected readings.
- Meeting no 2: continue the discussion based on literature and own experiences as academics and supervisors. Analyze different departmental cultures including different supervisory practices.
- Meeting no 3: share critical supervisory incidents linked to gender and diversity and receive feedback from peers.
- Meeting no 4 - workshop: suggest approaches for an inclusive - gender and diversity sensitive - supervisory practice.

The learning goals were to

- Analyze how gender and gender expectations may influence the interaction between PhD-supervisor and PhD-student(s)
- To use a gender perspective to interpret problematic situations that may occur
- Reflect on how gender is intertwined with other categories such as ethnicity, study culture, age, religion, sexuality, etc.
- Develop concrete tools for a gender- and diversity-sensitive PhD-supervision.

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REFERENCES

- Ankarloo, D. & Friberg, T. (red.) (2012) *Den högre utbildningen – Ett fält av marknad och politik*. Möklinta: Gidlund.
- Bernáld, H., Cajander, Å., Daniels, M. & Laxer, C. (2011) Reasoning about the value of cultural awareness in international collaboration. *Journal of Applied Computing and Information Technology*, 15(1), 12.
- Bondestam, F. (2010) *Kartläggning och analys av högskolepedagogisk utveckling och jämställdhet vid svenska lärosäten*. Stockholm: Delegationen för jämställdhet i högskolan.
- Brookfield, S. (1998) Critically reflective practice. *Journal of Continuing Education in the Health Professions*, 18(4), 197-205.
- Byrne, J., Jørgensen, T. & Loukkola, T. (2013) *Quality assurance in doctoral education: Results of the ARDE Project*. Brussels, Belgium: European University Association.
- Cajander, Å., Daniels, M. & McDermott, R. (2012) On valuing peers – Theories of learning and intercultural competence. *Computer Science Education*, 22(4), 319-342.
- Charpentier Ljungqvist, F. (2014) *Utbildning på forskarnivå vid Stockholms universitet – Resultat från studentkårens doktorandenkät 2012/2013: Rapport från Stockholms universitets studentkår*. Stockholm: Stockholms universitets studentkår.
- Gunn, V. & Fisk, A. (2013) Considering Teaching Excellence in Higher Education: 2007-2013: A Literature Review Since the CHERI Report 2007. Retrieved from: https://www.heacademy.ac.uk/sites/default/files/resources/telr_final_acknowledgements.pdf. [2016-05-25].
- Handal, G. & Lauvås, P. (2008) *Forskarhandledaren*. (1. ed.). Lund: Studentlitteratur.
- Holmström, O. (2013) *Forskarutbildningen vid Lunds universitet – Perspektiv från doktorander, doktorsalumner och handledare*. Lund: Utvärdering, Lunds universitet.
- Husu, L. (2005) *Dold könsdiskriminering på akademiska arenor – Osynligt, synligt, subtilt*. Stockholm: Högskoleverket.
- Kahnemann, D. (2011) *Thinking. Fast and Slow*. New York: Farrar, Straus & Giroux.
- Larsson, S. (2001) Seven aspects of democracy as related to study circles. *International Journal of Lifelong Education*, 20(3), 199-217.
- Leslie, S.J., Cimpian, A., Meyer, M. & Freeland, E. (2015) Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262-265.
- Lundborg, A. & Schönning, K. (2007) *Maskrosfysiker – Genusperspektiv på rekrytering, handledning och arbetsmiljö bland Uppsalas fysikdoktorander*. Uppsala: Institutionen för kärn- och partikelfysik, Uppsala universitet.
- Manathunga, C. (2011) Intercultural postgraduate supervision – Postcolonial explorations and reflections on Southern positionings. *New Zealand Annual Review of Education*, 20:2010, 5-23.
- Moss-Racusin, C.A., Dovidio, J.F., Brescoll, V.L., Graham, M.J. & Handelsman, J. (2012) Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences*, 109(41), 16474-16479.
- Newsome, J.L. (2008) *The chemistry PhD – The impact on women's retention*. A report for the UK Resource Centre for Women in SET and the Royal Society of Chemistry, 1-38.
- Peixoto, A. (2014) *De mest lämpade – En studie av doktoranders habituering på det vetenskapliga fältet*. Diss. Institutionen för sociologi och arbetsvetenskap: Göteborgs universitet. Tillgänglig över internet: <http://hdl.handle.net/2077/35675>. [2016-05-25].
- Robinson, C.V. (2011). Women in science – In pursuit of female chemists. *Nature*, 476(7360), 273-275.
- Ryan, J. (2005) Postgraduate Supervision. I J. Carroll, & J. Ryan (Eds), *Teaching International Students. Improving learning for all* (p. 101-106). London, New York: Routledge.

Ryegård, Å., Apelgren, K. & Olsson, T. (red.) (2010) *A Swedish perspective on pedagogical competence*. Uppsala: Division for Development of Teaching and Learning. Retrieved from: http://www.upl.umu.se/digitalAssets/45/45329_a-swedish-perspective-on-pedagogical-competence.pdf. [2016-05-25].

Schnaas, U. (2011) *Könsmedveten forskarhandledning – Teoretiska utgångspunkter och praktiska erfarenheter*. Uppsala universitet.

Schnaas, U. (2014) Addressing a gender perspective in postgraduate supervisors' training in a scholarly way – An example from Uppsala University/Sweden. In *ICED 2014: Educational Development in a Changing World*. 16-18 june. Stockholm, Sweden.

Schön, D.A. (1983) *The reflective practitioner – How professionals think in action*. New York: Basic books.

Spiller, D., Byrnes, G. & Bruce Ferguson, P. (2013) Enhancing postgraduate supervision through a process of conversational inquiry. *Higher Education Research & Development*, 32(5), 833-845.

Wenger, E. (2000) Communities of practice and social learning systems. *Organization*, 7(2), 225-246.

Wickström, J. (2011) *Mångfaldsmedveten pedagogik för universitetslärare*. Uppsala universitet.

Wolcott, H.F. (2008). *Writing up qualitative research*. London: Sage Publications.

- ⁱ Recent figures for Swedish Higher Education show that 47 % of all doctoral students are women, while women accounted for a third of all doctoral students in the early 1990s. The proportion of international doctoral students has been 40 % during the last three years, compared to 22 % in 2005. Statistics from the Swedish Higher Education Authority, downloaded 23 February 2016 from <http://www.uka.se/download/18.2c1cf90714d8a7973b2acaa/1434006272924/SM-1501-doktorander-examina.pdf>.
- ⁱⁱ The project is taking place from 2012 till 2017 with seven European universities participating and Uppsala University being its main project coordinator. Information downloaded 23 February 2016 from <http://www.festa-europa.eu/>. The web-based "Gender Sensitive PhD Supervision Toolkit", that was developed as a part of the FESTA project, is available at <http://www.festatool.eu/>, downloaded June 10, 2016.
- ⁱⁱⁱ At the Faculty of Science and Technology at Uppsala University, there is for example a mentorship program for female researchers on the post-doc level. The "Pathways to excellence"-conference at Uppsala University in 2015 had a number of keynote speakers describing their careers as successful female researchers in male-dominated fields. Downloaded February 29, 2016, from <https://www.scilifelab.se/events/wis2015/>. Likewise, Åsa Cajander held a keynote at the conference "womENCourage" 2015, addressing women in computer science. Downloaded February 29, 2016, from <https://www.youtube.com/watch?v=UAUzJQxfhIc>.
- ^{iv} The basic course "Supervising PhD students" is equivalent to a workload of three weeks including seven on-campus meetings; the introduction course for supervisors at the Faculty of Science and Technology is equivalent to a workload of three days.
- ^v See "Gender Equality Plan 2016", Department of Information Technology. Downloaded February 29, 2016, from http://www.it.uu.se/internt/policies_rapporter_handlingsplaner/Jamstalldhetsplan_IT_2016_eng.pdf
- ^{vi} See "Equal Opportunities Plan 2015–2017", Faculty of Science and Technology. Downloaded February 29, 2016, from http://www.teknat.uu.se/digitalAssets/400/400214_3lika-villkorsplan.pdf
- ^{vii} Seven out of eight participants answered the evaluation. When asked about the learning activities, five participants marked that the study circle's activities (small group discussions, discussions within the whole group, reading literature, discussing critical incidents and having a workshop) contributed to their learning to a rather high extent, while two participants marked that the study circle had contributed to the learning to a very high extent (options were not at all, to some extent, to a rather high extent and to a very high extent). One comment emphasized the importance of a dialogue with peers as well as with literature: "*Supervision can only be learned by experience. To exchange own experiences with others may help the learning process to a quite high extent. Discussions were, therefore, very helpful. Reading material was also about experiences of other people, and in that sense very good.*" Another comment stressed "*time for reflection*" as an important learning activity. The evaluation also confirms our impression that there was a good learning atmosphere: The questions "I feel that as a participant I have been treated well by the study circle facilitator" and "I feel that as a study circle participant I have been treated well by the other study circle participants" were both given the most positive answer: "Agree completely" by all seven participants. Furthermore, two participants marked that the study circle fulfilled its goals (as formulated in the invitation letter, see appendix) to a high extent while two answered that it fulfilled its goals to a very high extent. Finally, one participant rated the overall impression of the study circle as "good", and six as "very good".