

How can PhD supervisors help foster independent and critical student work in a multi-cultural setting?

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Introduction and problem statement

In a recent analysis of doctoral students learning process, Odena and Burgess found that “*Supervisors’ most helpful feedback appeared to be aimed at helping students learn how to learn by themselves, supporting the development of their critical thinking and writing*” (2017, p. 578). I think this is an interesting finding, and a relevant starting point for questioning how supervisors can help foster independent at critical student work. It has become a key question for my own development as a (PhD) supervisor. Given the university focus on internationalization, I want to explore this with regards to supervision of PhD students who come from more authoritarian academic traditions. This article focuses on the following question:

How can Nordic supervisors help facilitate independent and critical thinking in students from more hierarchical and authoritarian academic traditions?

I will discuss traditions of supervision and supervisor roles, as well as the supervisor-student relations, to address the question. In the paper, I focus on communication as an important element in the relation and place special attention on the use of meta-communication. Furthermore, I will explore the student learning experiences associated with three different types of written feedback: corrective feedback, positive feedback, and feedback as questions, as well as the learning-experiences associated with using vi-

sual tools such as diagrams or flowcharts. The purpose is to learn more about how I as a supervisor can support and facilitate learning among students through the use of different types of feedback, but also using other tools. I will highlight dilemmas related to the supervision of PhD students in a multi-cultural setting, as especially the dilemmas contain much food for thought for reflection on own practice, as they exclude easy solutions of 'recipes'. While it would also be relevant to examine the relations and communication between (co-) supervisors around each PhD student, the limitations of space shifts my focus on the communication between the individual Nordic supervisor (as myself) and the PhD students.

The context of this article is within a five-year research program, funded by the Danish Research Council for Development Research, involving collaborative research activities and PhD supervision by two Danish research institutions and universities in Uganda and Tanzania. The program involves four south PhD students inscribed as double-degree students at University of Copenhagen. Each has a total of four to five supervisors between the two universities where they are inscribed. The research project started 1½ years ago, and PhD students have been working for 1 year.

What does literature say about this problem?

Supervision of students from a different academic tradition, and collaboration between co-supervisors ingrained in different academic cultures, requires an awareness of the role and responsibility of a supervisors (and hence, students). As probably many other Nordic supervisors, I see my supervisory role as a facilitator of student learning processes. Rather than looking for a 'recipe' for good supervision (i.e. supervision that leads to learning in the student), this views supervision as a delicate balance between domination and negligence, in which the supervisor constantly faces dilemmas and new choices (Bastalich, 2017; Delamont, Parry, & Atkinson, 1998; Lee, 2008; Vehviläinen & Löfström, 2016). Inspired by Deuchar's analysis of doctoral supervision styles (Deuchar, 2008) and the idea-historical teaching/learning approaches mentioned by Molly and Kobayashi (2014), I see a coaching approach as being appropriate to facilitate learning, and thereby I orient myself towards what Vehviläinen and Löfström (2016) call the dialogical supervisory culture. The academic culture influences the relation and interactions between supervisor and student (Molly & Kobayashi, 2014).

Analysing international PhD students in a European context, Goode (2007) introduces the concept of dependent and independent learners, which summarizes well the ideals of teaching/learning processes in more hierarchical academic traditions versus Scandinavia. However, Goode points out that the individualization of learning contained in the discourse of the ideal of independent learners, underestimates that **learning happens as a collaborative process**. She argues that “*Academic success and failure are neither the property of the individual students nor of the instruction they receive, but lie rather in the relationships between students and the practices in which they and their teachers engage during the course of their ongoing interactions*” (p. 589). Through her study, she shows that the discourse of independence can be an obstacle for international doctoral students¹. Several authors highlight the need for explicitly addressing expectations between supervisors and students (See for example Andersen and Jensen (2007)). Kobayashi (2014) developed and analysed the use of formally prepared material for discussing expectations. The literature highlights the importance of making explicit the criteria supervisors use for assessing quality. In an international context, this is especially important, as supervisors from different academic cultures may use alternative criteria.

Balterzensen’s (2013) review underscores the role of **meta-communication** in supervision. This highlights the importance of paying attention to meta-communication, i.e. communicating about how we communicate, both with regards to having a transparent communication style, but also, at a higher level, regarding the strategic approach to the collaborative learning process. Several authors recommend that supervisors view a needed change in students’ approach to learning as a pedagogical challenge to discuss mutually, rather than as a supervisor responsibility (Molly & Kobayashi, 2014; Vehviläinen & Löfström, 2016)². Vehviläinen and Löfström (2016) also found that language, supervision style, feedback styles, and questions influence students’ learning and critical thinking, and the study by Odena and Burgess (2017) - mentioned in the introduction - also highlights the importance of communication for the student-supervisor relation, and the changes in this over time. Along the same line, Andersen and Jensen (2007) recommend that (graduate) supervisors become more conscious about the

¹ Following the same line of thought, Grant (2003) proposes that stimulus and support in learning and socializing graduate students should not depend on one or two supervisors, but to a larger degree involve the community of the department.

² See Bastalich (2017) for a review of what literature says about different supervision styles and supervision-student relations.

dialogue, conversation and interview techniques used during supervision. Likewise, a recent study found the degree to which supervisors encouraged students to think and act autonomously is associated with greater research self-efficacy in the student (Overall, Deane, & Peterson, 2011), which is an interesting and inspiring finding in the current context of international doctoral supervision.

Feedback is part of the communication that takes place between supervisor and student, with the purpose of creating learning in the student. Lotte Rienecker, Harboe, and Jørgensen (2005) recommend that supervisors prioritize, but limit their comments, especially when giving comments in writing. Following a finding that conversational comments can be used to cover broader and more sensitive elements than written comments, Könings et al. (2016) recommend the use of videoconferences as a supervision tool when students and supervisors are in different locations – again, a relevant finding for international research collaboration and PhD-training.

One of the questions that the abovementioned ‘dialoguing or coaching supervision approach’ deals with is how feedback and exemplary comments can be given a ways that support a development in the student towards a more independent learner, and a **critical and creative thinker**. The importance of giving specific feedback, also when it is positive, is highlighted by Handal and Lauvås (2005), who also propose that supervisors let the student speak first (for a proposal on a "contract" for interaction, see L. Rienecker, Jørgensen, Dolin, and Ingerslev (2013)). Caffarella and Barnett (2000) found in their study of scientific writing learning processes that a sustained and strong critiquing process, where students (learn to) give and receive useful feedback, is important for the learning process of becoming an academic writer. Yet, in the context of graduate supervision, Lotte Rienecker et al. (2005) warn against feedback that is too text-specific, as such feedback may not include overall comments related to the structuring elements of the work, such as research question, overall argument etc.

Vehviläinen and Löfström (2016) refer to a previous study by Vehviläinen (2009), arguing that feedback is not enough to create independent thinking. Rather, there is also a need for **interactional tools that elicit student views**. Diezmann (2005) uses mind-maps and outline-views as a way of stimulating independent thinking. An interesting study by Brodin (2016) finds that the encouragement of **students’ sense of agency** in their design of research and what she calls “pragmatic action” are crucial factors for improving their critical and creative thinking (See also Brodin and Frick (2011)).

Methodology and empirical basis

Based on the above, I designed a semi-structure interview guide, focusing on the individual student's reactions to, and reflections about learning outcomes from three different types of feedback, as well as exposure to more visual tools for thinking and conveying ideas. The reason for the focus on the feedback was, that this gave a concrete and shared frame of reference for the interview and the student's reflection on learning outcomes and reactions to different types of feedback. As such, my interview-guide had four pre-defined themes, which are reflected in the sub-headings in the analysis and discussion section. The interview guide also contained a question regarding moments of intensive learning experiences during the past year. I mainly use the answers from this part of the interviews in the first section of the analysis. Furthermore, many comments about supervisor-student relations emerged out of the interviews about learning outcomes and students' reflections on these, making up a fifth, emergent category in my analysis.

In addition to the individual interviews, performed during four weeks of collaborative fieldwork in Uganda and Tanzania, I also used participant observation regarding field research activities and reflections of the PhDs, including daily team dialogues. In each of the two countries, the research team consisted of two PhD students, two of their south-based supervisors, as well as two of the Danish supervisors. Furthermore, the entire first year of supervision and interaction with the PhD students, via skype, email and during a two-month stay in Denmark, also contributed to the empirical basis for my analysis. I took notes regarding learning processes, interactions, relations and questions posed by the PhDs during our fieldwork, and recorded the interviews and elaborated detailed notes on this basis.

While my empirical data for this article thus comes from a small sample, efforts have been put into the qualitative aspects, with dense note-taking and close personal relations. While no claim of representativeness is made, I argue that the sample of PhD students can be regarded as a 'representatives' of many of the different dilemmas that emerge in the context of multi-cultural PhD supervision, and thus have relevance beyond the specific research programme.

Analysis and discussion

Differences in **academic cultures** can be present in any inter-institutional collaboration, but probably tends to be more distinct and frequent in in-

ternational collaborations. This can create marked supervisory dilemmas, where meta-communication about the pedagogical challenges can help explain a choice of supervisory role as well allow for a mutual discussion of it with students (and co-supervisors). The differences in academic culture was expressed in one of the interviews, where a PhD student explained that in his country, *“traditionally, the supervisor will say ‘do this’, and give his input, and add, ‘if you do not do this, please do not come back’... ”*, indicating that there is not much room for discussion or for the student to find his or her own way forward.

Discussing and clarifying **expectations and challenges** was one way that the Nordic supervisor-team tried to prepare the students for the ‘clash’ in **supervision culture**, and for their learning of how to learn by themselves. The students’ participation in the University of Copenhagen intro-course for new PhDs was part of this. When interviewed about assignments or situations that spurred intensive learning, all mentioned the PhD intro-course, and “becoming owner of their own PhD project” as an eye-opening concept, and something that also changed how they related to supervisors and their own learning process. Nordic supervisors and students have used a checklist developed by S. Kobayashi as a guide for discussing mutual expectations regarding the supervision process and collaboration regarding the PhD process.

Differences in culture and expectations were explicitly addressed in almost every (Nordic) supervisor-student session. Finding the right balance where supervision styles (hands on/hands off) is a good match with student approach and background (dependent vs independent) (see diagram from Gurr (2001) in Deuchar (2008)) is challenging –both from the start of the supervision process, as well as through the progression of the project. For example, one of the dilemmas that I face as supervisor in this situation is that I fear that if I adjust my supervision style towards more hands-on, as especially one of the students requested, I may not lead him towards a more independent learning style - or that it may postpone the progression towards independent learning styles too much.

Realizing that there are large differences in supervision styles between co-supervisors as well as between what students expects and supervisors plan, it is important to be conscious about **meta-communication** – i.e. remember to communicate why we ask a certain question or why we ask interview questions in a certain way, or why wait with probing, explanations, etc. It is also important to ask questions to invite collaborative thinking and reflection, regarding both the fieldwork and the topics we do research on, as

well as regarding learning processes and interactions between supervisors and students is important. One way we practiced this during the collaborative fieldwork was to have group reflections every evening about what we had learned - and the implications thereof for the next interviews, for our understanding of our object of study, and our working hypotheses. One of the students mentioned these reflective sessions as one of the moments of intensive learning: *“I learn things [about something] I might have taken for granted... maybe I did not notice, but some colleague may see something - like the woman and her body language that you pointed out - and it makes me reflect and pay attention to new things.”*

The student also highlighted another experience from doing fieldwork and reflecting together, as containing intensive learning. Referring to an interview situation where one of his Danish supervisors probed into specific terms used by a local woman in an interview, he explained: *“I felt it as if the skin on my head was being stretched from learning [...] It taught me to listen to the people, what term they use, and still interrogate... Because, you may think you understand, if you do not probe... you go deeper and then you understand differently. It was a moment of wake-up in the fieldwork. This is very important. Validity of information – so much can come out of that small statement.”*

However, it is obvious from the interviews that especially one of the students was unfamiliar with the abstraction level and the reflective process it demands to talk about the learning processes and communication itself. Although being a doctoral student, he was unaware about his own learning processes and not even probing or inviting for reflection changed this. This is a huge challenge for the supervisor, as it prevents the development of a common language regarding student learning processes, which is a *sine qua non* for progressive development of knowledge in the student (and supervisor) about how the student can learn by themselves, as formulated by Odena and Burgess (2017). It shows that although the meta-communication and reflective exercises advanced conscious for most of the students about how they learn themselves, it did not have this effect on all.

Learning experiences from different types of feedback and assignments

Because much of the interaction between supervisors and students in the research programme happens via email and comments to electronic texts, I chose to use different types of feedback, given mainly but not only to

written texts, as a pre-defined categories in my analysis of learning experiences. The use of assignments including the use of visual tools as diagrams, flowcharts and mind maps were included as a fourth pre-defined category. A fifth category was emerging from the interviews and observations, namely the supervisor-student relation.

Positive feedback: Two of the students referred to positive feedback as something important, motivating them and giving them confidence. Both described that they could use the positive feedback beyond the concrete comments, as an example of something that works well, and then try to apply this to other parts of the text. *“It becomes a frame of reference for you, of how to improve the text”*. Positive feedback helped the students because they better knew what to retain in a text. However, the students often revealed a binary thinking, of “right” and “wrongs”, and asked supervisors to guide them, in order to not waste time.

Corrective comments: While it is important to spell out why something is not good, it may also be important, to give some suggestions about what it would take to improve the text, at least in the beginning. However, I would often like to hold back with providing concrete solutions, as the PhD students should develop the ability to do themselves, with supervisors facilitating their learning process. Here, metacommunication about why I hold back is important to ensure that the student do not think that it is either out of ignorance or out of lack of engagement. Yet, it caused fear in one of the students when he did not receive specific ‘recipes’ for improvement. However, even being given increasingly concrete suggestions for improvement, the student did not engage sufficiently in making improvements.

Comments as questions: Some of the students appreciated when comments were given in the form of questions. One student expressed that it *“gives room to think”*³. A colleague explained that he preferred comments as questions, because it gives him an opportunity to clarify in case of misunderstandings. Another student saw questions as something that stimulated deeper reflection. However, for the fourth student, questions provoked fear. *“I would prefer [...] that you say something so that I least I know this is how I am supposed to be thinking” [...] “If I get open questions, I get puzzled... I get — scared”*. This student was looking to have rules, norms and traditions within the field being mediated to him through the supervisor,

³ Yet the student added “...I only get frustrated when I read different things that say different things from different authors.” Again, I see this as an expression of a desire for things to ‘fit’ nicely and that literature should agree, which I interpret as being a consequence of an authoritarian academic culture.

rather than having his curiosity stimulated by questions and discussions. This could be understood as an individualized reaction to a cultural clash in academic traditions and supervision-styles (Molly & Kobayashi, 2014). Yet, it poses a dilemma for the supervisor, when some students appreciate a certain supervision style, while another rejects the same style - especially when this supervision style is intimately related to the supervisors' goal of teaching students how to learn by themselves, and be independent and critical thinkers. On the one hand, it may be seen as an expression of an unbalance in the above-mentioned delicate balance needed between supervision styles and student approaches, in each individual supervisor-student relation. On the other hand, however, it raises a not easily answered question regarding how long to accommodate individual student needs, versus when to draw the line and conclude that a match is not likely to happen, and that a PhD process will therefore be too much of an emotional roller-coaster, with too little coming out of it that meets the Nordic expectations of what a PhD requires.

Using visual tools as diagrams, flowcharts and mind maps: One of the students described the use of diagrams and other visual tools as something that helped him get new ideas and make [his own] sense of things. *“I felt that through the exercise of the flowchart, I made sense of a lot of things, and I got new ideas. [...] It helped me develop my own thoughts on this.”* Probing about which resources he drew upon when developing a flowchart, he described it as *“thinking... independent thinking. I get an idea. [...] It is freedom to think out of the box, without just using literature, and then later go to the literature to see whether what you are thinking, what you put in the flowchart, fits with what people write about, and then identify gaps... ”*⁴. Another student saw the benefit of visual tools as a good way to summarize. Yet, he also described how making a diagram also helped him get into the driver's seat and find his own position in literature discussions: *“Every author has a different view on variables... and once you get into the sea of literature, because there is so much written... it may be confusing, but then you can start to see which one will help you, with your study, because every author sees elements differently.”* Both these experiences seem to confirm

⁴ This spurred a talk about the possibility of using visual methods like mind map to map or organize literature into different strands of arguments or line of thoughts, rather than “getting confused” by the fact that literature does not agree... and as a way to move forward from a tradition seeking literature mainly to “confirm” something rather than to discuss and sharpen our critical eye to the elements that make different literature depart from each other.

the suggestion by Diezmann (2005) and Brodin (2016) about the relevance of using visual methods for stimulating independent and creative thinking. Yet, the last student was not able to say anything concretely about what learning and thinking processes, the use of visual or graphical methods had provoked in him, because he was not conscientious about it. My interpretation is that he was caught in a modus of reproduction, not responding to the stimulation within critical and independent thinking, possibly because of the fear produced. This might also be seen as an example of a negative result of a mismatch in supervision style and student approach.

Asking for examples of situations that had caused intense learning, one of the students replied with the **student-supervisor-relation**. *“My supervisor allows me to be able to fall and get up; to find myself. That is the most important thing as a student. Like a baby [whom] is not criticized that she is falling, until she leans to walk by herself. That is how I feel about our relationship [. . .]. Allowing the student to find themselves, their level, is very important, instead of spoon-feeding.”*

Another student also highlighted the student-supervisor relation as one of the elements that had been most important in stimulating learning in him: *“The relationship I have with you supervisors; the way we have moved around; I would have been holding back, feared that it might be used against me. . . but I do not feel that way. We learn.”* In addition to the relationship in itself, the quote also shows that the interaction in diverse settings, and doing collaborative fieldwork was important for providing opportunities for getting to know each other beyond the more formal interaction in university offices. I see this as an example of the team having succeeded with including the students in inspiring research practices with sound and respectful collegial interactions – and thereby ensuring that the learning becomes a collaborative process (Goode, 2007).

A third student highlighted that for him, an important element in the intensive learning stemmed from the opportunity to discuss freely, even about basic questions. He valued having the freedom to discuss and develop his thinking through the interaction with supervisors during the collaborative fieldwork. According to this student, this was *“not always an option at the university”*. This supports the recommendation by Hemer (2012) that supervisors are conscious about the influence of the context of the supervision, for example by sometimes creating a change from the traditional supervision in the supervisors office, to get out of the supervisors’ territory.

Each student highlighted the importance of face-to-face comments, and strongly recommended the use of skype-meeting as follow-up on written

comments (by email). The preference of conversation above written exchanges is probably linked to having a stronger personal contact and thus providing a media for communication that fits better with the coaching-supervision tradition, and one where questions are allowed and encouraged. It also fits with the recommendations made by Könings et al. (2016).

Conclusion

A coaching supervision approach aims at facilitating learning processes about how students learn to learn themselves. Metacommunication about learning processes and goals is important when supervising international doctoral students, who come from a more hierarchical academic tradition, for spelling out that independent and critical thinking is an important goal, and that supporting students to learn how to learn by themselves – and therefore also providing them with the space for their own proposals and errors - is an important part of this approach (Baltzersen, 2013; Molly & Kobayashi, 2014; Vehviläinen & Löfström, 2016). A clash in supervision-learning cultures may require that supervisors spend extra time on instruction and reflection with their international doctoral students, as also pointed out by Goode (2007). Supervisors of international doctoral students can benefit from paying attention to language, supervision styles, feedback styles and use of questions that stimulate critical thinking (Andersen & Jensen, 2007; Vehviläinen & Löfström, 2016). Literature (Brodin, 2016; Diezmann, 2005; Odena & Burgess, 2017; Overall et al., 2011; Vehviläinen & Löfström, 2016), as well as the empirical data for this assignment suggests that supervisors (and students) can benefit from giving comments as questions, as it leaves room for students to think for themselves, explain themselves, and find ways forward. Visual methods for communication and thinking about the research also seems stimulate independent thinking by (most of the) the students. However, for some students, feedback or assignments that involve methods that demand independent thinking provoke fear rather than creativity and development of new ideas. For some, the clash of academic cultures and learning styles may become too much of an emotional roller coaster. Therefore, while my research to some extent seem to support the finding by Overall et al. (2011) that the degree to which supervisors encourage students to think and act autonomously is associated with greater self-efficacy in students, I would argue that a modification of the

statement is needed, based on my finding that some students reject the [too big?] leap into the uncertainty of learning new competences in new ways.

Metacommunication is essential in creating a common language about the pedagogical challenges that international doctoral supervision poses. Metacommunication about written comments is also important to ensure that these are not treated as text-specific elements to “fix”. However, both literature and empery shows that feedback is not enough to create independent thinking. Other tools, such as the visual tools mentioned above, or interactional tools, are recommended (Brodin & Frick, 2011; Vehviläinen & Löfström, 2016). Encouragement, and the supervisor’s awareness about supporting the students’ sense of agency and ownership, both through communication and through practice, seems important. Yet, it also highlights the supervisory dilemmas faced in international doctoral supervision, where students may face a steeper learning curve, due to their exposure to a still foreign academic tradition. Learning often is accompanied by periods of frustration; and here, the use of metacommunication about overall goals of learning to learn by themselves, as well as the closer and more open student-supervisor relation are important resources to help the student overcome the frustration.

Perspective

During the progression of a PhD project, the challenges that the student and supervisor meet can be expected to change, leading also to changed relationships and different demands on the supervisor and her role, as well as she is likely to face different supervision challenges over time (Benmore, 2016; Boehe, 2016). There is thus a need for supervisors to continuously developing themselves through the supervision process (Halse, 2011), as one “becomes” a supervisor.

Another important aspect in international research collaboration that involves supervision, which has hardly been dealt with here, is the collaboration and communication between co-supervisors, especially when located at different universities, in different supervision cultures.

Finally, supervising students with English as second language (ELS), or coming from academic cultures with little tradition for writing and publishing, poses further challenges, especially when it comes to writing of articles and the dissertation. Odena and Burgess (2017) highlight the need

for ESL students in drafting and re-drafting texts, and the influence of the supervisor in developing their writing skills.

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