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# Cultivating motivation in development programs for junior supervisors – What does it take?

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## Introduction

Danish universities offer development programs on teaching for junior staff to help them develop their teaching competencies and conduct teaching successfully. In a Danish context, junior staff often have access to introductory courses on teaching and learning and courses on supervision. Several constraints need to be considered when designing supervision courses for PhD students. First, PhD students' work life involves various obligations beyond research (Andres et al., 2015). As Lindvig (Lindvig, 2018, p. 1181) notes, PhD students are 'expected to be many things, and managing these expectations seems to be at the expense of feeling insecure, of experimenting, of failing or behave unruly'. Indeed, a recent Danish study has reported on increasing feelings of stress among PhD students (Wichmann-Hansen, 2021b). Second, the is no 'one way' to be a good supervisor. Studies of supervision at Danish Universities find supervision to be a situated practice, among others affected by disciplinary understandings of supervision (Wichmann-Hansen & Herrmann, 2017) and different perceptions of student autonomy (Wirenfeldt Jensen, 2016) in student projects. Additionally, literature presents supervision as a highly temporally-embedded process (Ulriksen, 2014) depending on student motivation (e.g., prior experiences and future goals).

This project concerns a medium-term and cross-disciplinary teaching program on supervision for PhD students. Keeping the mentioned constraints in mind, the project aims to explore ways to cultivate PhD students' motivation and feeling of mastery. Self-Determination Theory (SDT)

framework was used to guide the course development (Deci & Ryan, 2000). SDT is a macro-theory of motivation, suggesting that intrinsic motivation is associated with autonomous behaviours undertaken out of interest or personal importance. According to Deci and Ryan (2000), autonomous behaviours are associated with personal value for learning, better outcomes, well-being, and engagement (Demir et al., 2019). Intrinsic motivation rests on the fulfilment of three basic psychological needs: autonomy (feeling of choice, self-endorsed, ownership of the learning process, and congruent within oneself), competence (feeling of capability, being able to perform academically, and a mastery of things important) and relatedness (sense of belonging, being connected, and mattering to others). Furthermore, autonomy-supportive environments are associated with facilitating self-determined student behaviour (Bonneville-Roussy et al., 2013). Teachers supporting student autonomy are predicted to 'acknowledge their students' emotions and thoughts, give adequate structure and feedback, give a meaningful rationale for tasks and provide opportunities for decision-making' (Bonneville-Roussy et al., 2013). The aim of this project, then, is to maintain and further develop a learning environment and activities that resonate with the three basic psychological needs.

## Project

### Setting

This study was conducted at a university in Copenhagen, Denmark. All the participants were PhD students from the faculties of Science and Health that were taking a course about the supervision of BA and MA students. Students represented various disciplines and research interests as well as supervision practices and experiences with supervision. The course enrolls around 15 – 20 students each semester. It is campus-based, lasts approximately one month, and consists of two course days (9 am –9 pm) with interim activities. The teaching is conducted by the didactical department associated with the science faculty. During the project, the teaching team included a junior and senior researcher from the department.

### First iteration

In autumn 2021, two teachers with several years of teaching experience but no experience teaching the particular course were appointed to the course.

As a form of apprenticeship, they adopted the course content, learning outcomes, and course program from previous years to benefit from years of experience teaching this course and knowledge of the subject and critical issues. The course focused on supervision issues such as formal rules and regulations, student feedback, student learning, and supervisor-student relationships. Already, the learning environment appeared to be autonomy-supportive. In particular, it emphasised relatedness by involving class discussions, group work focusing on a challenging and personal supervision experience, and dialogues (interviews) with regular students. Figure 1 depicts the course's flow, focus, and planned teaching-learning activities.

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|---|---|---|---|---|
| **Out-of-class** | **Pre-work for day 1**<br>Readings<br>Individual work:<br>- Share course expectations and supervision experiences | | **Pre-work for day 2**<br>Readings<br>Individual work:<br>- Identify formal rules and regulation<br>- A short interview with a student on supervision | |
| **In-class** | | **Day 1:**<br>Focus:<br>- Matching of expectations<br>- What is supervision<br>- What roles and responsibilities are involved?<br>- Feedback: Why, how, and when?<br>- Difficult supervision | | **Day 2:**<br>Focus:<br>- Formal rules and regulation<br>- Follow-up on the interviews<br>- Matching of expectations<br>- Supervision letter<br>- Course evaluation |

**Figure 1.** Course's flow and focus, iteration 1.

### Supervisor letter

However, fewer activities focused on the fulfilment of competence. Therefore, the teaching team implemented a new teaching-learning activity focusing on the development of a supervisor letter (Wichmann-Hansen, 2021a).

A supervisor letter 'is a written account (2-3 pages) of the supervisor's individual practice, i.e. what students can expect from the supervisor and vice versa.' (Wichmann-Hansen, 2021a, p. 95). On the one hand, the activity is meant to help the participants identify and communicate their supervision practice to students. On the other hand, the activity aims to support and develop students' feelings of mastery within a failure-tolerant context. From an SDT-perspective, the activity also supports autonomy by integrating a student perspective, focusing on participants' goals in focus, and offering flexibility. To help relatedness, participants were placed in small groups to discuss the letters and class discussions were facilitated. The rationale for creating a supervisor letter was presented and discussed in class. The literature emphasises that a supervisor letter might be valuable for reflecting on one's teaching and facilitating a conversation with students about roles and responsibilities. Reflecting on one's teaching might help participants to take ownership of their supervision actions. In class, the teaching team emphasised how the letter might help PhD students address and solve real-life problems that revolved around supervisors and students having different expectations.

**Course outcome**

A survey was distributed on the course's last day to learn about participants' learning experiences. All participants responded (n = 19). The majority of participants responding (79%) found the course relevant/highly relevant. Sixteen per cent said that the course was somewhat relevant, and 5% said that it was not relevant. Participants found the writing of the supervision letter to be relevant. Indeed, the supervision letter was mentioned in 12 of 18 free text postings made of things that participants found particularly relevant. Participants were also asked to mention anything that they found less relevant. 9 out of 18 participants replied. Some mentioned not benefitting that much from the more 'theoretical' and general stuff, which was 'a little difficult to directly implement' (quote from the evaluation). Others experienced having too little time to engage productively in the interview with students. Finally, participants were invited to share suggestions for improving the course. Participants suggested prolonging the course, having more time for exercises, spending less time on abstract terms, and having more emphasis 'on problems that students can run into and maybe support systems that the university has in place' (quote from the evaluation).

**Second iteration**

Based on our reflections and participants' feedback, the teaching team decided to engage in a second iteration of the course to strengthen the relevance of the course. Specifically, the teachers were interested in revising the course to meet participants' need for autonomy and competence.

**Innovations**

First, seeking to increase the relevance of the course, the team critically assessed and adapted the intended learning outcomes. In the ways of Biggs and Tang (Biggs & Tang, 2011), the teachers sought to move from more unistructural ILOs, some of which focused on declarative knowledge, to ILOs oriented towards relational levels and functional knowledge (see Table 1).

**Table 1.** Revision of ILOs.

| Old ILOs (verbs underlined) | New ILO's (verbs underlined) |
|---|---|
| The supervisors will improve their skills to: | |
| - acquire knowledge about the students' experiences and interests through dialogue and small exercises, and the participants are aware of the importance of gaining this insight<br>- provide feedback to the students' written or oral presentations in a way that facilitate the students' learning process.<br>- reflect on the importance of balancing the control exercised by the supervisor and the students' own control of the process and the project, and techniques to adjust and evaluate this balance | - provide feedback to the students' written or oral presentations in a way that facilitate the students' learning process.<br>- Identify, articulate, and reflect on the participant's supervision practice<br>- Connect supervision to local rules and regulation of supervision as well as knowledge about supervision |

Next, the assessment format in the course was discussed. Like many other short and medium-term development programs, this course had no actual formal summative assessment process or product. While lack of assessment might cultivate a trusting learning environment and benefit autonomy and learning from a lifelong learning perspective, the lack of an 'end product' that requires substantial investment on the participants' part can limit participants' opportunities for deep engagement (Prosser & Trigwell,

1999; Stenalt, 2021). To overcome this tension, the team decided to emphasise the supervision letter as an end product, representing participants' process of adapting knowledge to their practice and context. Therefore, more time was allocated to developing this artefact. Additionally, we included an activity that allowed students to reflect on their practice and lessons learned from the course (a reflection note).

Third, the teaching-learning activities were adapted according to the thinking in constructive alignment (Biggs & Tang, 2011). Yet, the adaptation also focused on (a) increasing participants' motivation by ensuring that they would have more time to engage in discussions with peers and better opportunities to learn to master specific supervision competencies and techniques and (b) reducing the number of shifts between topics. Therefore, the course program was structured accordingly. See Figure 2 for the design of the revised course.

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|---|---|---|---|---|
| **Out-of-class** | **Pre-work for day 1**<br>Readings<br>Individual work:<br>- Share course expectations and supervision experiences<br>- Identify formal and informal rules and regulations | | **Pre-work for day 2**<br>Readings<br>Individual work:<br>- Develop a draft of a supervision letter | |
| **In-class** | | **Day 1:**<br>Focus: Rules and regulations<br>- Matching of course expectations<br>- Rules and regulation<br>- Roles and responsibilities<br>- A difficult situation | | **Day 2:**<br>Focus: Supervision techniques:<br>- Supervision letter<br>- The questioning wheel<br>- University resources for students<br>- Questions from the box<br>- Reflection note |

**Figure 2.** Course's flow and focus, iteration 2.

## Results

The impact of the second iteration was explored using two means of exploration. First, the PhD students in the course (n = 17) were invited to fill out an electronic course survey. The data were collected on the last course day. No reminders were sent out. The questions used in the survey differed from the first iteration due to a change in the digital survey system and access to survey items. An oral follow-up was conducted in class. Second, approximately one month later, all students in the course received an email invitation to reflect and share their longitudinal outcomes from the course, focusing on the development of their supervision competencies. One reminder was sent out. Four students replied.

### Survey: Immediate outcome

Fourteen participants filled out the course survey. Participants found the course highly rewarding (92%) and somewhat rewarding (to some degree, 7%). Thirteen comments were made about what participants especially enjoyed. Everyone found the discussions in class and groups meaningful and highly rewarding for developing their own practice and thinking. One mentioned the excellent atmosphere for having conversations. Six people said the supervision letter made them 'think about our own approach to supervision and we now have lots of different models to follow and compare with'. Others emphasised the value of learning basic supervision techniques and enacting these in class to minimise the gap between theory (class) and practice.

Despite this, there is room for improvement. Among others, participants requested better instructions online on what to do, more discussions about the student experience, and they highlighted some redundancy in topics. The comments from the oral follow-up in class supported the quantitative statements.

### Email: Prolonged outcome

The teaching team was also interested in the longitudinal impact of the course and, in particular, if participants still experienced feelings of mastery. The responses from participants illustrate that it appears to be the case for some. Participants described feeling confident, competent, comfortable, and professionally capable (to do supervision). The words associated with

the mentioned concepts illustrate that some participants link competence to being able to conduct supervision more effectively while others associate competence with having developed some human resources that allow them to approach students and the student-supervisor relationship from a different perspective. Both perspectives illustrate how competence from a PhD student perspective is linked to acting responsibly and intentionally and having resources (skills and knowledge) to use when needed in a work situation. Also evident from the statements, peers' real-life practices are a crucial source of competence fulfilment. The experiences of peers appear to be highly meaningful, allowing individual participants to mirror their practice and act autonomously on the knowledge offered. More so, applying lessons learned and techniques presented and reflecting on theory contributed to the feeling of mastery.

## Conclusion

In this study, a course for PhD students was adjusted to cultivate participants' motivation and feelings of mastery in supervision. The redesign involved revising the ILOs, assessment format, teaching-learning activities, timing, and course tempo. The redesign led to a higher percentage of participants being satisfied with the course. The adjustments appear to support motivation and cultivate mastery in a way that is likely to have a longitudinal impact. In addition, a clear relation between relatedness with peers and autonomy for supervision could be identified. Sharing experiences and learning from others was interest and need-driven, without external control, and participants were free to adopt the insight (or not). The range of practices also made it clear that there is no 'one way' to do supervision. Instead, teacher autonomy is essential.

In the next iteration of the course, the teachers seek to re-integrate some aspects from the first iteration to cultivate in-depth discussions about students and their challenges, as requested by some students in the course evaluation. In addition, different ways to increase participants' mastery of specific supervision tools such as the questioning wheel will be considered.

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