Doctoral supervision has been described through a number of models useful for understanding different aspects of supervision. None of these are all-encompassing, but each emphasizes a particular perspective, like the relationship, personal vs. structural support, process vs. product orientation. In running courses for doctoral supervisors, one aspect that escapes attention when using these mental models is assessment and such model can support new supervisors in reflecting on how to build autonomy. There is a body of research into the PhD examination, but this has not been translated into formative assessment during the PhD process. This proposal aims to fill that need by suggesting a mental model of supervision as formative assessment.

**Keywords**: PhD supervision; Autonomy; Formative assessment

## MENTAL MODELS FOR DOCTORAL SUPERVISION

### Need for yet another mental model about supervision

I take my point of departure in teaching doctoral supervisors from science and health disciplines about supervision, where I have seen that new doctoral supervisors often point to building doctoral student autonomy as the most difficult and pressing issue in their development as supervisors. The balancing act between giving directions and letting the students make their own decisions is a challenge to new supervisors. In our course we present and discuss a number of mental models of different aspects of supervision to give supervisors the foundation to reflect on and make changes to their supervisory practices, as is common in similar workshops internationally (McCormack & Pamphilon, 2004). We also involve supervisors in activities about feedback, e.g. written feedback on texts, and discuss the differences between summative and formative feedback in that connection. From there we have taken steps to broaden the concept of feedback into formative assessment, drawing on work by Harlen (2013) and Dolin (2016). However, there is a need to translate their model to the context of doctoral supervision to increase relevance for supervisors. By developing a mental model of supervision as formative assessment we will have the foundation for supervisors to discuss and reflect on how they can involve doctoral students in the assessment process and thereby building their academic judgement and autonomy.

### Research into supporting autonomy in doctoral education

Lovitts (2008) point to a number of components that are critical for doctoral students to make the transition from being dependent on close supervision to the stage where they are expected to be autonomous and independent researchers. The independent researcher is seen as capable of making an original contribution to knowledge, which again requires creative performance. She identifies self-direction, perseverance, tolerance of ambiguity, a willingness to take risks and intrinsic motivation as factors that are critical to creative performance, and hence completion. However, she does not suggest what supervisors can do to enhance these components. In his much cited work Gurr (2001) suggests a toolkit for doctoral supervisors to align their supervisory practice with the needs of their doctoral students. The assumption is that students need more direction and guidance when they are dependent, and more ‘hands-off’ supervision as they become competent autonomous. Again, he does not discuss exactly what supervisors can do to support autonomy. Other researchers question the need for independent researchers, as Johnson, Lee and Green (2000) argue that in today’s societies there is more need for competences as collaboration and interdependence and thereby broaden the concept of autonomy.

Another relevant perspective on autonomy comes from Dysthe (2002) as she discusses how supervisors connect to their students when giving feedback on texts, either as authoritative ‘teachers’, as apprentices in a
research group with students as novices, or as partners where the text was a joint responsibility although the student is less experienced and knowledgeable.

Research into formative assessment indicates that self-regulation and hence autonomy can be supported through involvement of students in the assessment process (Boud & Soler, 2015), but the link to doctoral supervision has not been made so far. In earlier work Boud and Lee (2005) suggested peers as critical in the doctoral process, but here they do not make the explicit link to formative assessment. Formative assessment involves the explication of criteria, and some work has been done in that field, e.g. by Alyson Holbrook and her group in University of Newcastle in Australia (Holbrook, Bourke & Fairbairn, 2015; Holbrook et al., 2012). They have investigated feedback in different disciplines, including science. Other work was undertaken by Lovitts (2007) based on interviews with supervisors and provides very general criteria.

The intention of this proposal

The aim of this proposal is to suggest a model of formative assessment in the context of doctoral supervision. The model will be a further development of Wynne Harlen’s model (2013) where I will integrate research on the PhD process and doctoral supervision (c.f. Boud & Lee, 2005; Dysthe, 2002; Johnson et al., 2000).

A MODEL OF DOCTORAL SUPERVISION AS FORMATIVE ASSESSMENT

The model developed by Harlen (2013) depicts a circular process of students’ activities, evidence of their achievements, judgement and next steps in the learning process, with students involved in interpretation and judgement, and in deciding what and how the next steps should be taken. Translation into the realm of doctoral education means that the goals and the learning processes are more fluid as the research process by nature cannot be foreseen and planned in detail. It is through the research project that competences are acquired and knowledge produced. The overall goals encompass the implementation of a research project with production of new (original) knowledge, and the communication of this in the doctoral thesis, but the assessment criteria for usually tacit. The list of criteria provided by Lovitts (2007) is very general and difficult for new supervisors to translate to their discipline. The model itself does not list the assessment criteria, but in order to substantiate the model with discipline specific assessment criteria it may be necessary to supplement the criteria form Holbrook’s group by investigating this at our own faculty. The model indicates that criteria need to be explicated and shared between supervisor and doctoral student.

To illustrate the formative approach very clearly I display two contrasting examples of the model, one based on Dysthe’s notion of the supervisor as ‘teacher’ (Fig. 1) and another based on her notion of the supervisor as partner (Fig. 2) (Dysthe, 2002). The model is based on Harlen (2013) and Dysthe (2002), and developed further based on work by Dolin (2016).

Figure 1. Supervision as feedback with supervisor in charge as the authoritative teacher (Dysthe, 2002).
Figure 2. Supervision as formative assessment with supervisor and PhD student as partners (Dysthe, 2002).

The model will be tested with doctoral supervisors during my teaching in spring 2017 and refined based on our common experience and their feedback.

ACKNOWLEDGEMENT

I wish to take the opportunity to thank Prof. Jens Dolin for his inspiration and feedback on my teaching, leading to the development of this conceptual proposal.

REFERENCES


