

Doctoral education in a national network: providing an epistemic space?

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Introduction

In 2018 the Swedish National Graduate School for Digital Technologies in Education (GRADE) was initiated as a cooperative venture between six Swedish universities. In 2020, the Swedish national research school for the digitalisation of teacher education (in short called UPGRADE) was initiated. GRADE and UPGRADE aims to strengthen the expertise in these areas on a national level in Sweden and, in doing so, increase both national and international cooperation in research training activities. One of the fundamental pillars of GRADE and UPGRADE is the networked character of the doctoral studies, with joint courses provided by the participating universities and arranged using an interdisciplinary approach. The doctoral students are admitted to different disciplines, among others Applied IT, Computer science, Curriculum studies, Education, Educational Work, Informatics, Media technology, Technology and Learning, and Work Integrated Learning. This implies that several issues with a bearing on the digitalization of education, will be researched by the doctoral students from different epistemological and analytical perspectives and with different methodological approaches. At the 2020 Networked Learning Conference in Kolding, a first symposium was held where six of the doctoral students from the GRADE research school presented their work (Lindberg & Lundin, 2020). These reported on theoretical frameworks ranging from the theory of practice architectures (Kemmis et al., 2014; Mahon, Francisco, & Kemmis, 2017), basic conceptual underpinnings of behaviorism (Skinner, 1974); Actor-Network Theory (ANT) (Latour, 2005); Wenger's expanded theory of Communities of Practice; a multimodal perspective including things-to-things, things-to-human and human-to-human connections (Bonderup Dohn, Cranmer, Sime, de Laat, and Ryberg, 2018; Jones, 2015); and a focus on the technologies and their functions.

Prior research on doctoral programs (Jones, 2013) has been described using six themes: teaching, doctoral program design, writing and research, employment and career, student-supervisor relationships, and the doctoral student experience. Exploring the socialization experience of doctoral students in six disciplines at one institution, Gardner (2010) found four common themes that were recognized across boundaries. Although the disciplinary context and the culture varied, support, self-direction, ambiguity, and transition cut across. Departing from actor-network theory focusing on the role of material things in the process of becoming a doctor, Barnacle and Mewburn (2010) showed how scholarly identity is distributed and performed in both traditional and non-traditional sites of learning and how the doctoral students are part of different networks with different meanings. Felt et al. (2013) had a focus on early-stage researchers and how they manage to reconcile demands of transdisciplinarity with other normative requirements. In a follow-up study, Brodin and Avery (2020) turned to the concept of epistemic space to discuss how doctoral students experience their learning environment, distinguishing four ways: as a world of opportunities, an alien world, an avoided world, and a joint world. In this sense, an epistemic space provided room for epistemic discussions that aim to promote a wider understanding of research and science as being part of different epistemic cultures. At this symposium, we will discuss these issues as aspects of a networked learning environment.

In this symposium, there will be six doctoral student presentations, all with quite different approaches to their doctoral projects both regarding methodological issues as well as analytical and epistemological issues. In all cases presented and discussed, epistemology is upfront in the project, providing explicit possibilities to reflect different stances in relation to other doctoral projects (bear in mind that the doctoral students presenting in this symposium are five out of around thirty active doctoral students in the network), thereby allowing for in-depth discussions in the doctoral program on epistemological issues. How the epistemological assumptions each doctoral student depart from affects issues of analysis, possible scientific realms of their projects and possible claims they may have. The core of the discussion at this symposium depart from the concept of epistemic space.

The first presenter Fabian Gunnars will address analytical issues of networked learning research related to special needs support and learning analytics research in primary education. Very brief suggestions based on

political, economic and technology-developmental dimensions are provided, highlighting benefits of approaches commonly implemented in special education, such as radical behaviorist methodology.

The second presenter Jussara Reis Andersson describes and analyses how school organizers network to expand the access and use of digital technologies in the educational system. The digitalization of the educational system requires digital competence since digital technologies develop fast. It involves a holistic view and a lifelong learning perspective.

The third presenter Sara Mörtzell lays out a set of analytic challenges for doing doctoral research with Actor-Network theory (ANT) and how conventional research technologies such as computer-assisted qualitative data analysis software acts on the knowledge that is made possible. The empirical examples are pulled from online interviews in the pandemic outbreak and two ways of assembling the analytic practices of those interviews. The examples trouble the expectations of a singularised doctoral journey.

The fourth presenter Alex Örtegren discusses two conceptualisations of digital citizenship common in educational research, Ribble's nine elements and Choi's four-category model, and how these reflect digital citizenship in a postdigital era, including potential implications for teacher education. The presenter argues that critically analysing digital citizenship is important as conceptualisations informing TE may impact the preparation of future teachers to teach for digital citizenship in a postdigital era.

The fifth presenter Katarina Parfa Koskinen departs from an Indigenous research paradigm when investigating whether a relationally intertwined onto-epistemology is present in a policy document presenting knowledge claims from the Sámi parliament in Sweden regarding *árbediehtu*, traditional Sámi knowledge. If so, a discussion is outlined on implications for Network Learning, and especially as occurring in remote Sámi language education.

The sixth presenter, Jennie Berg, explores and reflects methodological considerations for a study of classroom practice as networked learning. The area of interest is instruction in reading children's literature in primary school classrooms, i.e., emergent literature didactics.

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