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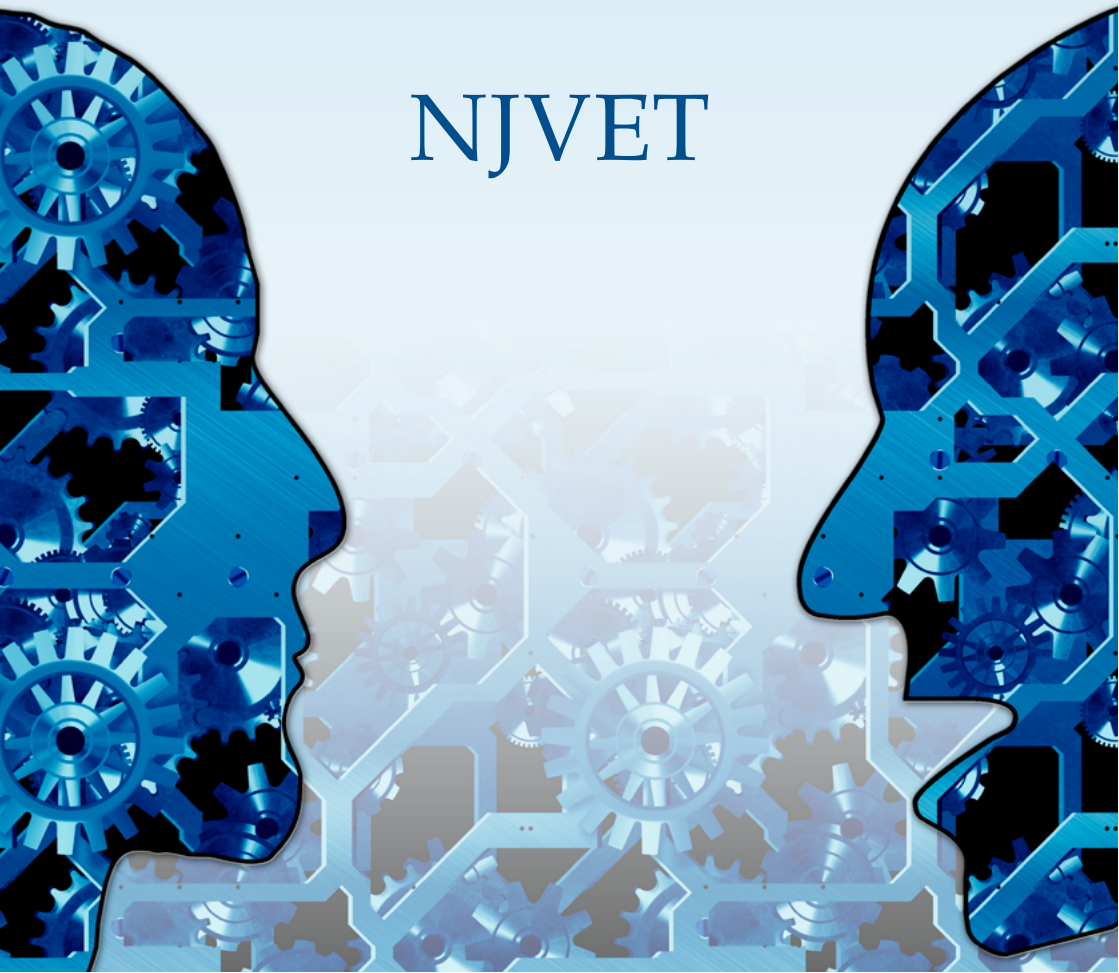




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Editorial: Cooperation and interaction between research, teaching, and learning in VET

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The initiative for this special issue on the cooperation between research, teaching, and learning in Vocational Education and Training (VET) was launched with a symposium during the Nordyrk conference at Linköping University in 2022. The idea for the symposium emerged in a meeting of the network's steering group, which includes representatives from five of the Nordic countries. At this meeting, the challenge of collaboration between VET and research, and vocational teachers and researchers was discussed, for example the contribution of research to the teaching-related issues identified within VET. After this meeting, an abstract for a symposium was submitted to the Nordyrk conference 2022, to create an opportunity to discuss these issues within the Nordic countries.

The title of the symposium was *Collaboration between vocational education and training and research/teachers and researchers*. The symposium explored and discussed various areas and questions from both teaching and learning (in VET, teacher education, and teacher's professional learning community) and research perspectives. This included the challenges of collaboration, but also successful examples of collaboration between vocational teachers and researchers. The symposium resulted in a proposal to a call for a special issue in the network's journal, the *Nordic Journal of Vocational Education and Training*.

A question raised by the call was how evaluation and development have become essential tasks for vocational teachers (Hiim, 2023; Sandal, 2021). Current



questions for vocational teachers in the context of evaluation and development might include pedagogical and didactic strategies and decisions: 'When we decide things should be done in a certain way, how did we decide this, and why? Where do the ideas and methods in teaching and training come from? How do we use results from research into our teaching in a way that promotes student learning?' These questions are about critically evaluating teaching methods on a meta-level. Teachers ask questions that may need to be investigated in a more systematic way, contributing to new knowledge, confirming what appears to be successful and challenging beliefs and traditions. In some cases, there is a distance between teachers' and researchers' questions. Researchers may face challenges in connecting with vocational teachers and education. The distance between education and research can be large. Likewise, teachers may perceive that researchers devote themselves to issues other than those related to practice and teaching. Both teachers in VET, teachers in teacher education, and researchers are influenced by traditions, policy, history, and experiences (Duch & Lund Nielsen, 2022; Harris, 2017). Teachers may express this as: 'Because we've always done it this way, and it works,' or 'We have a policy on how to do things,' addressing social, individual, and economic considerations. Researchers may follow established routines and methods, stating: 'Because we have data that leads us to these methods,' or 'Because we've experimented, tried different approaches, and tracked their success using reliable methods.' For researchers, a goal may be to publish articles regardless of their relevance to vocational teachers' practice. A critical question is: How can VET teachers effectively communicate with researchers about challenges and development needs, and how are these issues received? Hence, reflection on cooperation and learning is important as well as the context (Berglund et al., 2020; Bound, 2011). At all levels, vocational education and training should be both scientifically and vocationally grounded (Gonon & Bonoli, 2023). Vocational education plays an important role for society's competence, and in terms of attractiveness, relevance, and outcomes (Grubb, 1985). Similarly, higher education has the mission to provide education, conduct research, and collaborate with society, objectives that align with vocational education (Billett, 2009). In a rapidly evolving society, there are mutual needs. Political initiatives may aim to facilitate students' completion of vocational programmes, yet vocational education cannot always meet professional practice demands (Billett, 2000). From a student perspective, VET qualifies them for employment or further studies in a chosen field, presenting opportunities and challenges that need addressing (Moodie et al., 2019; Tomlinson, 2008). Research should be designed and implemented in collaboration with professional practice, emphasising that development in any field requires multiple perspectives, innovative initiatives, and careful follow-up. In summary, collaboration is an expression of two or more actors with different perspectives and often their own goals doing something together, to achieve something that would not be possible on their own. The special

issue deals with a historically challenging and in some cases unique collaboration between research and professional practice, or between research and vocational education.

This special issue features articles from Denmark, Finland, Norway, and Sweden, representing eleven different perspectives on collaboration. The studies focus on cooperative activities and analyse these initiatives. The participants, purposes, and outcomes vary, highlighting different possibilities and contributing to critical discussions. A challenge reflected in the articles is that the studies do not always follow traditional methods. For example, some studies involve researchers participating in collaboration, while simultaneously conducting data collection.

The articles represent three areas. *The first area* focuses on vocational teacher education, and integration between scientific ground and vocational skills, pedagogical and didactic issues. Vocational teacher education aims to prepare students for a profession where evaluation and development of teaching are standard practices. VET should use continuous evaluation and development based on identified needs. Vocational teachers' critical reflection, based on various perspectives, is essential when making changes. Instead of focusing solely on what vocational teachers do, the question should also address how education and teaching contribute to students' learning and knowledge development.

The second area concerns collaboration between vocational teachers and researchers to contribute to relevant knowledge development. Practice-based studies have long been a topic of interest, referred to by terms such as action research and interactive studies (Ellström et al., 2020; Hardy et al., 2018). The goal of collaboration could be a research project or a collaboration-based project. The question remains how vocational teachers and researchers can create opportunities to discuss observations, needs, and challenges? And how can vocational teachers and researchers define their respective roles in a collaborative context?

The third area represented explores collaboration among vocational teachers, students, and researchers in various organisational contexts. These studies address meeting points where questions about knowledge interests, scientific perspectives, vocational identity, and perceptions of their roles are discussed. A recurring theme in the articles suggests that collaboration between researchers and teachers in VET requires methodological considerations and reflections. This collaboration cannot be based solely on research or vocational demands; it must involve mutual understanding and commitment from all stakeholders. This may point to a need for a new category of research tradition focusing on this interaction.

The work of *vocational teachers* should be grounded in scientific theories and research, vocational skills, and experience-based knowledge, influencing vocational teacher education. For example, the opening article of this issue, *Roles of science and research in vocational teacher preparation: A case study from a Norwegian*

VET teacher programme by **Eli Smeplass, Lene Hylander, and Chris Zirkle**, examines an initiative to integrate science, vocational skills, and experience within a course. The course aims to provide students with an understanding of scientific ground, theories, and concepts and their application in vocational practice. Through assignments, students engage with these three perspectives. The study analyses vocational teacher students' perceptions of the course's contribution to their future practice and competence.

The second article, *Examination as knowledge development: A case study from vocational education and training* by **Øyvind Glosvik and Dorthea Sekkingstad** also focuses on vocational teacher education, and how examinations contribute to knowledge development within VET. School management teams are audiences at a university exam taking place at the vocational school. This brings practice closer to the teacher education, makes room for sharing knowledge, and opens new possibilities for co-creating.

The third article about teacher education is *Grensekryssing i yrkesfaglærerutdanningen: Betydningen av studentenes utviklingsprosjekter* (Boundary crossing in vocational teacher education: The role of students' development projects), written by **Øyvind Granborg and Nina Aakerne**. Vocational teacher students work with development projects, and this reveals a possibility for coherence between university and teaching practice. The interviews with the students show that it enhances boundary learning.

The following articles address among other themes the area of collaboration between vocational teachers and researchers to contribute to relevant *knowledge development*. Article four, *Expansive conceptualisation of the impact of continuous learning programmes: An analysis of research-based workshops in higher vocational education and training*, is written by **Sanna Juvonen, Tarja Kantola, and Hanna Toiviainen**. They present a study about multi-professional discussions that are facilitated by researcher-developers in online workshops during the COVID-19 pandemic. Based on cultural-historical activity theory they find a potential for impact in this approach but also contradictions in the learning programme.

Bjarne Wahlgren and Vibe Aarkrog reveal in *Developing of knowledge in practice-based research: Research circles as an example*, how research circles can be used as a method to conduct practice-based research about the researcher's role in the process of generating different kinds of knowledge. They argue that the ability to transform theoretical knowledge to apply the knowledge in real-world practices is necessary, to bridge the gap between practice and research.

Anne-Birgitte Nyhus Rohwedder, Britta Møller, and Julie Kordovsky use self-study methodology in the article *Forsker-praktiker-samarbejde som et ligeværdigt videns- og læringsrum: Et didaktisk anliggende* (Creating knowledge equity and a social learning space in practitioner-researcher collaborations: A didactic perspective), to get insight in knowledge triangle collaboration in network meetings between researchers and practitioners. The study addresses how a knowledge

triangle can be used to challenge the image of research as a knowledge producer, and a self-critical dialogue about the need for knowledge between researchers and teachers.

The rest of the articles in the special issue contribute to the third area, exploring collaboration among vocational teachers, students, and researchers in *various organisational contexts*. In *Perspektiver på forskningens mulighed for at bidrage til kvalificering af teacher agency: En empirisk analyse fra et projekt i samarbejde mellem erhvervsskoler og en professionshøjskole som forskningsinstitution* (Perspectives on how research can contribute to qualification of teacher agency: An empirical analysis base on cooperation between vocational colleges and a university college as a research institution), **Henriette Duch** and **Rune Thostrup** present perspectives on how research can strive to find new solutions to identify problems in teaching practice. When focusing on well-being and the notion of teacher agency a new suggestion for development becomes visible.

Susanne Gustavsson addresses school development in *Möjligheter och begränsningar vid samverkan om undervisningsnära skolutveckling och forskning i yrkesutbildning* (Possibilities and limitations in collaboration on teaching-related school development and practice-based research in vocational education). Long-term collaboration between teachers in the role of leading teacher groups and researchers has shown how school development can be promoted. The article uses theory of practice architectures and stresses the importance of addressing the questions relevant for teachers and vocational education.

The article written by **Charlotte Wegener** and **Anja Overgaard Thomassen** has the title *Theorising a research-practice collaboration as social innovation: Reflections from an emerging 'third context'*. Based on long-term partnerships the finding is that the gap between research institutions and schools can be bridged while a third context emerges. In this collaboration different degrees of theoretical and experimental knowledge are included.

In *Vocational knowing and becoming in VET and VTE: How bringing them together can provide new insights for vocational pedagogies*, **Helena Korp**, **Lina Grundberg**, **Maj-Lis Lindholm**, **Marie Påsse**, and **Martina Wyszynska Johansson** write about partnerships to develop school-relevant research. Investigating the notion of the good teacher they address vocational knowing and becoming in different communities of practice.

The last article, *Learning trajectories in arts and vocational teachers' situated professional learning* written by **Anna Annerberg** and **Martin Göthberg**, aims for knowledge about professional development in teachers' collaboration. Their findings are that even when teachers work closely together there is a solitary learning process. Hence, they suggest new structures for packages for professional development.

We, as editors of this special issue, hope that the articles, that each have further perspectives than mentioned here, will contribute to more research that can both develop collaboration and further knowledge in the field.

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Roles of science and research in vocational teacher preparation: A case study from a Norwegian VET teacher programme

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Abstract

Bridging vocational skills and scientific principles can pose challenges in vocational education and training (VET) teacher programmes. This study aims to enhance such programmes by exploring the potential of reflective practices among students and educators on the nature of science and research in VET contexts. Engaging VET teacher students with multidisciplinary backgrounds in a learning community, the study explores how to further develop research-based teacher training by 'nudging' student cooperation. A pedagogical course designed to appreciate students' prior experiences aimed at preparing them to reflect upon their own professional development from a scientific perspective. Using five focus group interviews with 19 first-year students, the study identifies and explains four key factors for quality in VET teacher training: relevance of pedagogical theory, the value of a multidisciplinary approach, recognition of students' VET backgrounds, and the importance of community in learning. The findings emphasise the significance of creating coherence between research, vocational skills, educational theory, and real-world applications to develop quality in VET teacher training. This study has implications for educators and policymakers, underlining the need for a comprehensive approach to research-based VET teacher competence that integrates personal, academic, and professional elements.

Keywords: vocational teacher training, research-based education, vocational education and training, science



Introduction

Vocational education and training (VET) teachers are crucial in linking professional knowledge and skills with VET as practiced in work life and educational contexts (Antera, 2021; Oviawe et al., 2017; Rapp et al., 2023). This study is guided by the following research questions: *How can VET teacher training empower enrolled students to engage with science and research, and what can be learned from students' experiences to develop high-quality, research-based VET teacher training?*

Creating quality VET teacher training can be complex, especially when student teachers come from diverse backgrounds and work experiences, requiring individual support to navigate the conflicting logics of the labour market and educational systems (Hylander & Smeplass, 2022). In the changing landscape of VET demands, there is a need for updated approaches in VET teacher training, particularly in bridging the gap between vocational skills and pedagogical expertise. VET teacher education is pivotal for ensuring that VET students are provided with appropriate and relevant training for their future careers (Levin et al., 2023). In this respect, the quality of VET teacher courses is an important aspect of providing VET teachers with the relevant tools and approaches to succeed in schools (OECD, 2021). As part of this special issue on the cooperation between research, teaching and learning in VET, this research contributes with a perspective from inside a Norwegian VET teacher training programme where students were invited to participate in research regarding their own professional development as part of a learning community.

The article reports on a four-year development project at a Norwegian university focused on improving the coherence and relevance of a bachelor's programme for student teachers with a background in VET. In international research, it is evident that VET teacher training is a complex field of study, where finding the balance between the practical aspects of vocations and teacher professionalism is a recurring theme (Atkins & Tummons, 2018; Bünnig et al., 2022; Kosloski et al., 2022). Nordic scholars have previously argued that there is a lack of literature on 'vet teacher education' (Loeb & Gustavsson, 2017), and that there is a need for more research both in Nordic and English languages. Yet, this field is swiftly advancing and must be recognised as an international domain, transcending regional and linguistic boundaries.

In Europe, VET teachers are trained very differently to cater to the specific national systems they serve, based on learning context and content they are termed trainers or teachers (Misra, 2011). Internationally, the terminology and scope of vocational education and teacher preparation also vary significantly. VET teacher education is also referred to as 'teacher training' or 'teacher preparation'. Similarly, Vocational Education and Training (VET) itself may also be known as Career and Technical Education (CTE) in some contexts and Technical and Vocational Education and Training (TVET) in others, reflecting a

diverse international research landscape that encompasses various educational levels and specialisations. While there are great differences between how VET is organised and taught in different places, teacher training is also diversified across national contexts (Cedefop, 2022). However, certain aspects of teacher training can be regarded as common issues worth discussing across national and contextual borders. VET teachers are for the most part required to have a degree in a specific field of studies, plus an appropriate pedagogical qualification (Cedefop, 2022). In most VET systems, a vocational teacher should be competent both in a vocation and in the teacher profession (Köpsén & Andersson, 2017). While VET teacher training typically involves pedagogical training, a unique challenge for this group of teachers is the bridging of vocational professions with specific learning contexts in schools or companies. Therefore, researchers have investigated the development of VET teacher's double identities as a specific aspect of VET teacher training (Antera & Teräs, 2024). International discussions about VET teachers training reveal tensions that arrive when constructing 'teacher professionalism' (Schmidt, 2017; Smith & Yasukawa, 2017). In Norway, the VET teacher curriculum mandates broad and in-depth VET knowledge and skills (Ministry of Education and Research, 2013). This illustrates how *the Norwegian VET teacher role* is designed to train students in all VET settings, including schools, companies and other workplaces (Cedefop, 2022), a relevant context for this study. Possessing practical skills does not in itself equate to being a well-prepared VET teacher or developing a professionalism that includes abilities to deal with modern life diversity and moral complexity (Hargreaves, 2000). Quality in VET training necessitates strong connections between the school system and the companies that provide training and future employment. Critiques, such as those by Hiim (2017), highlight the Norwegian curriculum's failure in schools to ensure relevance for young trainees, illustrating the necessity for educating teachers who are able to orient themselves in educational landscapes to ensure both experienced relevance and scientific incorporation. Prior research in Norway, including Hylander and Smeplass (2022), and Smeplass (2022), underscored the risk for disengagement of VET student teachers when their prior certifications and work experiences are not meaningfully integrated into their teacher training.

To be a professional teacher entails having in-depth knowledge and skills in the field, in addition to knowledge about teaching (Helleve et al., 2018). Further, a professional teacher has a reflective approach to their own teaching and seeks knowledge and experience to develop it (Hammerness et al., 2005). This study contributes to a deeper understanding of integrating practical skills with educational theory, offering valuable insights for educators and policymakers in the field of VET on how teacher professionalism can be built upon both VET

experience and science, when students are engaged through communities of practice.

In the next section a theoretical description for VET teacher training is outlined, using the concepts of communities of practice and teacher collegiality. This is followed by details of the context of our Norwegian case study. Subsequently, the methodological approach is described, and the analysis follows, illustrating our four themes for critical engagement of students in the course. Through analysing five focus group interviews with 19 first-year students, we identified four key themes: (1) the importance of relevance and practical application of theory; (2) the value of a multidisciplinary approach to teacher training; (3) the need for recognition and acknowledgment of students' VET certificates and work experience; and (4) the importance of developing a sense of community and belonging through learning networks and collaboration. Lastly, we present a discussion and conclude on how educators must navigate science as part of quality development in VET teacher training.

Theories for VET teacher training

The study is informed by theories of communities of practice, emphasising the social constructions of learning in community as presented by Lave and Wenger (1991). This theory highlights the relationship between learning and the context in which it occurs, arguing that learning is not merely an individual cognitive activity, but a social and cultural event influenced by communities of practice (Smepllass, 2023a, 2023b). We employ this perspective to the organisation of the course for VET teachers and have integrated the acknowledgement of learning as a social process in the analysis. Furthermore, the perspective on teacher collegiality, developed by Hargreaves (2013), highlights how teachers should be *nudged* into collaboration for enhanced learning. In teacher education, this entails using the learning situations to develop a sense of professionalism and community, that fosters critical reflection through open dialogue between students and educators (Smepllass & Hylander, 2021). This perspective is used to understand how science as an integral part of VET teacher education can foster professional development. We argue that these theories are particularly suitable for studying and developing quality in VET, as they acknowledge the social processes of learning and developing professional integrity and identity.

In Norway, the integration of vocational theory and pedagogical training into a bachelor's programme for VET teacher training has been operational since 2007 (Rokkones et al., 2019). This development reflects a broader trend in education that responds to evolving labour market needs. Teachers are increasingly expected to adapt to changes within their vocations and to provide training that aligns with labour market demands (Ministry of Education and Research, 2015).

The evolution in VET teacher training is part of a larger interest in enhancing overall teacher education quality (Smeplass & Leiuilfsrud, 2022; Smeplass et al., 2023). As educational systems globally have become more intertwined with political and economic considerations, the reliance on scientific evidence to inform educational policymaking has grown (Wiseman, 2010). This shift is evident in the evolving professional standards for teacher education, where empirical evidence from educational research is increasingly valued for shaping teacher professionalism (Diery et al., 2020). The concept of 'professional competence' in this context has evolved to encompass both professional practice and practice-based learning (Antera, 2021; Mulder, 2014). This is particularly pertinent for vocational teachers who must balance expertise in their professional field with their emerging skills in teaching. This dual role presents challenges in developing a cohesive teacher identity, as they navigate the dynamics of professional practice, which often require a degree of standardisation, especially in safety-critical fields (Antera, 2022; Eick, 2009; Mulder, 2014). Research-based teacher education has become a key norm in striving for educational quality. However, the integration of research into teaching varies considerably across institutions and programmes (Munthe & Rogne, 2015). In vocational teaching, this translates into a complex transition between various occupational domains, involving the negotiation and mediation of competencies as individuals integrate their prior experiences into their new educational roles (Antera, 2022; Smeplass, 2023b). VET teacher students must therefore find ways to integrate their skills and experiences in a meaningful way. Research has shown how VET teachers experience various inter-related professional, educational, and personal dilemmas due to rapid changes in society (Nakar, 2016; Zirkle, et al., 2019), illustrating how VET teacher training is a highly contested and political topic worldwide (Smith et al., 2015). A pedagogical question is how universities can develop programmes and courses that includes the professional development of the individual with the societal need for strong and reflected teachers. Our study sheds light on the intricacies of developing high-quality, research-based VET teacher training in an environment where multiple branches of science converge. Aligning with international discourse, our findings stress the importance of integrating personal experience, academic learning, practical training, and labour market realities in teacher education (Adoniou, 2013; Darling-Hammond et al., 2012). In study programmes similar to the one studied, where VET teachers come from different VET tracks prior to their entrance, educators should reflect upon what the differences between natural and social sciences is, as VET pedagogy and VET didactics need to incorporate these logics for students to understand the role of science in the teaching profession and in the development of their vocational fields. Figure 1 illustrates how such VET teacher training incorporates different aspects in a compound scientific field.

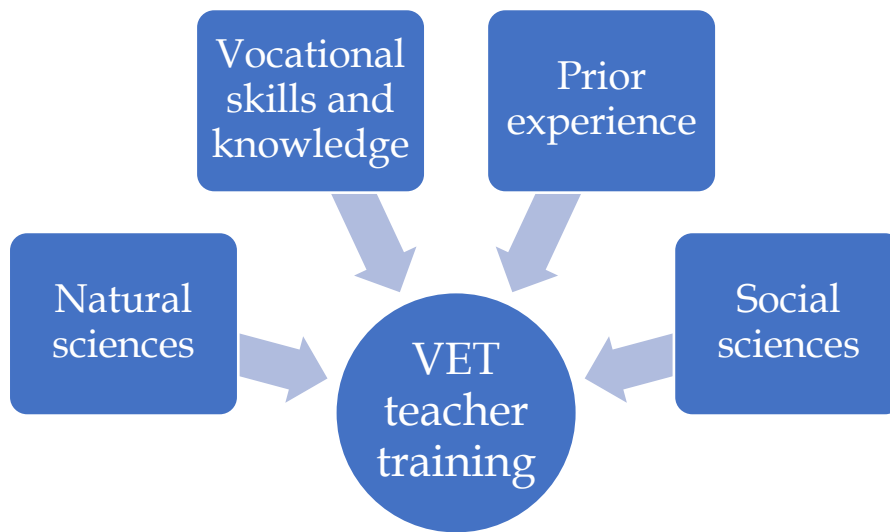


Figure 1. Integration of sciences, vocational skills and experience in Norwegian VET teacher training.

In this model, pedagogy and didactics are represented through the social sciences, while natural sciences encompass the knowledge that comes from fields such as physics, engineering, medicine and more. At the same time, prior experiences both professional and others are essential for the programme in this study. In the following section, we will continue by explaining the context and approach of our study before we continue to the analysis.

A Norwegian case study

In Norway, VET is taught in upper-secondary school through ten different clusters – each leading to one of about 200 certificates (Smepllass & Schmees, 2023). The teacher training programmes are designed to prepare VET teachers to teach in one of these clusters and build upon prior VET experience. After completing a bachelor’s programme, the VET teachers are qualified to teach in schools or companies. Since 2020, educators at the Norwegian University of Science and Technology have been developing a vocational teacher course, tailored to a standardised requirement for all student teachers. The three-year bachelor’s degree in VET teacher training is designed to align with the Norwegian national curriculum, emphasising strong ties between vocational, pedagogical, and practical training in both educational and corporate environments. The specific course for this study, comprising 7.5 ECTS, is mandatory for these VET teachers in their second semester. The curriculum requires students to

spend three weeks per semester on campus, dedicating one day each week to this specific course. Given the Department of teacher education's status as Norway's largest, these standardised requirements are generally focused on providing a foundational theoretical understanding of the teaching profession within a Norwegian context. However, over the past four years, the course has been continually refined to better suit the specific needs of VET teachers, employing active learning methods to successfully integrate pedagogical theory into vocational education (Hylander & Smepllass, 2022, 2024; Smepllass & Hylander, 2021). In this context pedagogical theory is a concept that encompasses learning theories and the philosophy of education as an integral part of educational sciences. Norwegian VET teachers often find roles in upper secondary schools as teachers in one of the ten VET clusters. Others end up working in secondary education or as trainers and mentors in the corporate sector. A breadth of potential roles underscores the importance of developing a professional approach to teaching practical subjects and addressing the needs of both students and businesses (Sylte, 2021). The course development was guided by these inherent dualities in VET teacher training, integrating various organisational logics from inclusive educational systems to market-driven selectivity. After three years of leveraging student evaluations to refine the course, it was restructured in spring 2023 to serve exclusively as a specialised course for VET student teachers (Hylander & Smepllass, 2024). Table 1 illustrates the content of the specialised course.

Methodological approach

The study is a development project that includes several sources of information, from course curriculum, informal information gathered during teaching sessions and qualitative systematic approaches to ensure validity, reliability and a systematic approach (Merriam, 2015). Focus groups are well suited to foster an open dialogue between participants and give them the opportunity to share their ideas and have them acknowledged or challenged by other group members (Kamberelis & Dimitriadis, 2011). Out of 10 collaborative groups in the cohort, five groups self-selected to be part of groups interviews during the semester's final session. These students volunteered to share their experiences and to use the session to reflect upon their own learning and give the educators feedback. A survey was conducted with the entire cohort, enabling a joint discussion on the course organisation and usefulness with the students, while also providing an important anonymous option for feedback. Nineteen students participated in the group interviews, each lasting between 60 and 80 minutes. Students provided written consent and were assured of their right to withdraw at any time.

Table 1. Themes and tasks in the course.

Task	Theme	Pedagogical intention	Expected product	Relevant scientific sources
1	Group collaboration	Facilitate understanding of diverse vocational backgrounds; Promote collaborative skills.	PowerPoint presentation on vocational backgrounds.	Øiestad (2021).
2	Science in vocational education	Explore the use of scientific knowledge in vocational teaching and development.	Documentation of research and discussion findings.	Kjelsberg (2022), Smepllass (2022).
3	Master apprenticeship	Understand the historical and contemporary relevance of master apprenticeship in vocational training.	Reflective notes and analysis of texts.	Nielsen & Kvale (2021), Rasmussen (2021).
4	Learning methods	Develop critical reading and assessment skills through annotated bibliographies.	Annotated bibliography of selected texts.	Illeris, K. (2012).
5	Learning theories in vocational education	Apply learning theories to understand and enhance vocational training.	Summary of learning theories relevant to vocational education.	Sylte (2021), Chapter 6.
6	Curriculum and teaching planning	Reflect on curriculum and its translation into practical teaching.	Sketch of a teaching plan based on selected curriculum goals.	Sylte (2021), Chapters 3 and 10.
7	Ethical awareness in teaching	Develop ethical consciousness and decision-making in educational settings.	Teaching plan on ethical awareness for educators.	Sylte (2021), Chapters 4, 8, 11.
8	Vocational teacher's role	Reflect on the evolving role of a vocational teacher in contemporary education.	Individual teacher profiles.	Sylte Chapter 8, Smepllass (2022).
9	The concept of Bildung in education	Explore the role of danning in vocational education and its societal impact.	Teaching plan highlighting the concept of danning.	Straume (2016).
10	Innovative teaching methods	Develop and propose innovative teaching methods for future vocational education.	A detailed plan for a R&D project.	Sylte (2021). Various educational resources.
11	Podcast creation	Enhance communication and technical skills through creating educational podcasts.	A 20-minute educational podcast on a chosen topic from the course.	Various resources on podcasting. Podcast studio provided by the university.

Emphasising the non-evaluative nature of their feedback, the main investigator assured participants of their freedom to speak candidly without impacting their course assessment. Through the semester, teachers and students developed a professional relationship that enabled a respectful, and curiosity driven approach to discuss professional development and learning processes (Webster & Mertova, 2007). The interviews were conducted on the university campus in a group room during the last training sessions of the course, prior to the exams. The groups' assignments were assessed collaboratively by the teachers at the end of the semester, after the data had been gathered. Given the inherent power dynamics in researching a student group one is teaching, special attention was paid to ethical considerations (Kincheloe et al., 2011), such as being an open listener and acknowledging the students' needs for recognition during the interviews. Furthermore, careful considerations regarding the researcher role and responsibilities towards the students were carefully considered (Fleming, 2018). The interviewers led the discussion but took role of being an active listener and curious conversation partner, engaging with positive body language and asking follow-up questions when needed. Students were informed that the researchers were responsible for respecting their opinions and upholding the integrity of the study. If they experienced something they did not want to have included in the transcriptions they could let the researcher know, and anything they said would be removed from the analysis. Given that no participants gave indications of any issues, we assumed that the students' experience was well informed and that the interviews were conducted in a confidence enhancing manner. Furthermore, the anonymous questionnaire which contained both predefined and open questions did not show any discrepancies to the narratives shared during the interviews. Hence, the study was registered with and approved by the Norwegian Agency for Shared Services in Education and Research (Sikt), and adhered to strict ethical standards, particularly focused on mitigating any adverse effects of participation.

The focus groups, led by one or two researchers, were recorded and transcribed. An interview guide prompted students to discuss their professional development, the relevance of their vocational background to their future teaching careers, and their engagement with the course content. The interview guide was based on experience from prior studies, the theory of communities of practice, and was designed to foster a group-based dialogue where the students were more active than the interviewer. Using Nvivo, the analysis involved a meticulous review of the data, identifying key themes in student feedback and coding extended dialogue segments for systematic evaluation. The analysis was a mix of thematic analysis and inductive interpretation from the researchers (Braun & Clarke, 2006), who coded and recoded the data in two cycles with discussions of the findings throughout. This approach facilitated comparisons across group narratives and individual feedback and contributed to the quality

of the interpretations. Including inductive interpretation was useful to ensure that the students' experiences were at the center of our investigation. To ensure confidentiality, student identities were anonymised, and minor adjustments were made to the transcript excerpts for readability in English (Wa-Mbaleka, 2019). The excerpts in the analysis have been specifically chosen to give readers insight into the interview setting to assess the context and understand the dynamics of the interviews. Some words are also indicated in their original language.

Analysis

This analysis is based on the four themes developed through our analysis strategy, and illustrates the central aspects of the students' descriptions of how they engaged with science and each other through the course: (1) the importance of relevance and practical application of theory; (2) the value of a multi-disciplinary approach to teacher training; (3) the need for recognition and acknowledgment of students' VET certificates and work experience; and (4) the importance of developing a sense of community and belonging through learning networks and collaboration. These themes are presented by providing information about the course and other contextual factors in combination with examples from the interviews alongside explanations of how we interpret the data.

The importance of relevance and practical application of theory

In our study focusing on a general pedagogy course within a VET teacher programme, we explored how pedagogical theory, covering knowledge, learning, and the concept of 'Bildung' in the Nordic context, impacts students preparing for professional teaching roles (Hylander & Smepllass, 2024; see also Table 1). This context is relevant to understanding how the students experienced and reacted to the course content. Our previous studies have indicated that students can find academic requirements overwhelming (Hylander & Smepllass, 2022; Smepllass, 2022, 2023a, 2023b), and this has become an integral part of the course design to empower students through communities of practice (Lave & Wenger, 1991). According to the Norwegian national curriculum for vocational teacher training, students are required to have pedagogy, didactics, as well as pedagogical practice (Ministry of and Education Research, 2013). The curriculum is designed to support their professional development and bridge between vocational knowledge and skills, scientific knowledge, and practice. As a requirement at their bachelor's programme, during their first year, students have 20 days of practice in upper secondary school, 10 days in secondary school and 15 days of practice in a company to develop their vocational knowledge and

skills. In addition to these practice requirements, 80% of the student population in this programme are full-time employees already teaching students before they have obtained the formal qualifications. This entails that students need to find the theory they are taught to be relevant for their professional development. The analysis of the focus group interviews indicated that students in general were able to bridge the rather abstract theoretical framework into their practical experiences and responsibilities, illustrating how the students were able to use pedagogical theory for professional development when they found the course content relevant. One student mentioned that:

[Pedagogical theory] is a proper toolbox that you can use as a teacher yourself. It enables you to understand how you learn to be a teacher ourselves. The more strategies we have, the better, I believe.

Another student pointed out that even though they had already worked as unskilled teachers for two years prior to starting at the bachelor's programme:

When you start the training, you become more confident. You feel more secure in what you already have to face [as a teacher]. You become more assured in the relational aspects of the profession, but also more confident in that what you are doing already is actually quite good. The things you have learned being in the profession into the school, it's the right way of doing it. And you understand the theories more when you work with them in practice. You become like ah... That's why everybody is talking about Dewey. [...] I wanted to send a message to my school principal and say, I know who Hiim and Hippe is.

Both of these examples illustrate how students can feel empowered by pedagogical theory, when it makes sense to them in relation to the work they envision themselves doing, or even complements their established practices in schools. Several of the informants describe theory as something that gives them a 'proper vocabulary' for central aspects of the learning process, and that it becomes easier to speak with colleagues at the schools when they can use certain terms and phrases commonly used by teachers in their field. This way, pedagogical theory is not simply external knowledge they are required to learn but becomes part of their professional understanding of being a teacher. In one group, the students discussed how theory assisted in facilitating communication with colleagues and enhancing understanding of educational reforms, such as the 'knowledge promotion reform' since 2020:

Student A: Now after this course I understand what the overarching elements of the reform is. [...] Now I understand that I will educate the vocational workers for the future. I have colleagues who wanted to retire, because there were new demands. People want to be in their comfort zone.

Researcher A: But do you feel we support you in handling this?

Student A: Yes, because we learn many new tools we can use, and we understand the reform more. We understand the terms they use. Use of terms, assessments, decoding. If someone asks me about the term *bildung*, I can answer 'yes, yes, it is

like this'. If you asked me 6 months ago, I would for example think 'What do they mean by the term upbringing'. What do you other guys think?

Student B: I agree with you, because now you know the theory. Because like the term Bildung, it has just been there. I have never bothered to investigate more, even though I probably should. But it helps that you can reflect much more.

Other students describe the theoretical frameworks from the course as intuitive, for example the aspect of 'learning by doing', inspired by John Dewey, or reflecting upon the use of methods in light of the pedagogical thinkers Illeris (2016) or Straume (2013). Overall, students indicated a very steep learning curve being first-year students at the programme. However, the analysis of the focus group interview showed that students in general found good use of the theories and concepts they were presented with because they were encouraged to reflect upon their practical meaning, as well as develop materials together that exemplified their meaning in concrete ways.

The value of multidisciplinary approaches in teacher training

The second theme in the analysis is connected to the teaching activities in the course on one hand, and the diversity of skills and knowledge in the group on the other. The study programme in focus for this research, accepts students with certificates from electrical subjects, health, building and construction, industry subjects as well as restaurant and food services. In the profession courses these students all come together into one larger group of approximately 40–50 students per cohort. The course design for this specific cohort required the students to perform and document 11 different 'tasks' connected to the curriculum. These were initiated on campus during the three week-long gatherings during the semester, and the students would continue to collaborate digitally between them as they were situated at different parts of the country. The tasks were designed to utilise the multiple disciplinary backgrounds of the students in a way that would foster dialogue and collaboration through developing various outputs such as teaching materials, presentations, reports and podcasts collaboratively (an overview of the tasks can be found in Table 1). Each task was strategically designed to integrate the diverse skills and experiences of the students, highlighting the applicable value of a multidisciplinary approach to VET teacher training. These tasks, while they varied in nature, shared a common thread – the application of theoretical knowledge in concrete, real-world contexts. The course began with establishing collaborative groups of four to five students, where they explored their diverse vocational backgrounds. This exercise was intended to foster a deeper understanding of each other's experiences but also highlighted the multifaceted nature of vocational expertise. The students were also trained in critical examination of feedback mechanisms within group dynamics and practical teaching scenarios, to support their collaborative efforts. The course ventured into the concept of master apprenticeship [in Norwegian, *mesterlære*],

where students discussed its evolution and contemporary relevance, particularly focusing on how this time-honoured tradition continues to shape vocational competence today. To deepen their critical thinking and evaluation skills, the students engaged in creating an annotated bibliography, assessing the strengths and weaknesses of various educational theories and practices. Throughout the tasks, the underlying emphasis was always on applying pedagogical theories in practical settings, either to foster the students' own learning, or to envision how the concepts could be used as guiding principles in future teaching situations. As shown in Table 1, the students were challenged through the course to think critically about the role of science in the vocational teacher profession, making the learning process both dynamic and rooted in each individuals' real-world experience to ensure the relevance of the course. This blend of practical application and fostering their theoretical understanding aimed to equip them with the tools necessary to navigate the mentioned complexities of vocational education effectively. The teaching design was based on prior experiences from the development project (see for example Hylander & Smeplass, 2022, 2024; Smeplass & Hylander, 2021). Being a VET teacher is about demonstrating knowledge of specific vocational subjects, while students also need to develop skills that are of a more generic type. One example would be developing their teaching in a way that enables learning. Many of these aspects are shared across the different vocational fields, such as teaching design, evaluation, democratic awareness, observation and documentation of learning processes and more. In this programme, the multidisciplinary student group requires their educators to teach in an inherently diverse setting, and identifying commonalities and general aspects of what good teaching is, becomes pivotal in ensuring professional training for all students in this context.

As a case of a multidisciplinary VET teacher preparation, the analysis of the students' experiences of this teaching design illustrates how students can use their own experiences to build a professional identity to relate to the teacher role. One of the students described how he mirrors himself in the university lecturers:

You have become my role models, because when I have my practice in schools... on one side I am a student here, but I am also a teacher. So, I observe my own teachers: How do you treat us in the lecture room. And sometimes, you actually do things I know I do not want to do myself... [joint laughter]. I have become relying on the iceberg model you made for me for example.

The student explains how he finds value in having these different roles and observes the own surroundings in the development of his teaching strategies. This process is often referred to as teacher identity formation (Andersson & Köpsén, 2019; Timoštšuk & Ugaste, 2010). As part of their boundary crossing between the vocation and the role and status of being a professional teacher, the

students use the multidisciplinary space they are engaged in as a community of practice (Hargreaves, 2000, 2013; Lave & Wenger, 1991; Smepllass, 2023a).

This group discussion showcases how the students explain how the methods in the course were useful to develop their own teaching:

Researcher: And can you say something about how you have experienced the work method in the course?

Student C: I find it terribly exciting. I have used it in my own teaching. Both with podcasts and making posters. How you can achieve the best possible learning with the right approach. So far, after I cracked the codes in [the subject], I have used it unconsciously. I understand why you have this subject. I didn't get it at the first meeting, but gradually I have understood.

Student D: I was a bit overwhelmed that there were so many tasks to do in total. I thought, oh God, how is this going to be. But I have actually liked it, because it has been concrete throughout the semester. So, it's a bit different than other courses.

Student E: It's very good that the tasks have free reins. And optional submission methods. It makes it very flexible to discuss and reflect together.

Student D: It was really nice in task 7, then we filmed a video. And it was fun to do such things too. Not just produce text.

All of the five groups interviewed mentioned that they found the multidisciplinary space they participated in together as useful and inspiring, although some pointed out that they experienced a mismatch between the workload and the credit points in the subject. This illustrates how one risk of letting students decide how to solve tasks themselves can sometimes lead to excessive efforts. Several students explained how the concrete tasks in the course contributed to developing new skills they want to employ in the profession. One student said: 'It is very important to be given the freedom to decide methods ourselves.' At the same time, they explained how one of the tasks, where they were asked to make a teaching plan for other teachers, made them insecure because it was complicated to envision how others would interpret their suggestions.

In one of the discussions, a group described how they can use each other's strengths when they produce joint products in the course. One student explained:

In this group we have divided the tasks [...] someone is very good at creating structure, others are good at taking notes from discussions. I just wrote down what everybody said, and all of a sudden, we had two whole pages. [...] I believe that in this group we are all quite structured people, and we like to make good products.

The comment shows how these students, even though they had quite different backgrounds (chef, social worker, welder, and children- and youth worker), they could all use their various skills in solving the concrete tasks, although it required some negotiations between them to agree on their division of labour. Another student explained how he had to alter the way he reflected upon some of the production standards he was used to strive from as a professional chef:

When I worked in the kitchen, I always looked for perfection. But after I started this education, I have realised that I cannot look for the perfect result. I need to look for the imperfect, because that's how you can identify rooms for improvement.

After this comment his fellow students could agree with the principles of focusing on the aspects of learning, more than the end product, which is often the focus in several productive professions. Overall, this theme illustrates how students in the course found ways to develop their professional identities and roles through multidisciplinary group work. The diversity within groups fostered dialogues bridging practical and scientific aspects of becoming a vocational teacher, enriching the learning experience.

The need for recognition and acknowledgment of students' VET certificates and work experience

This theme underscores the importance of acknowledging and valuing the professional expertise and experience VET student teachers bring to their educational journey. Prior investigations have shown how teachers who manage to balance their teacher identities with their occupational identities by maintaining their participation in the different communities seem to be the best prepared to teach their vocational subjects (Antera, 2023; Fejes & Köpsén, 2012; Köpsén & Andersson, 2017; Smeplass, 2023b). In Norway, the prerequisite for enrolling in the VET teacher bachelor's programme includes a craftsman's or journeyman certificate, along with a minimum of two years of relevant vocational experience (Ministry of Education and Research, 2013). This requirement ensures that VET student teachers possess specialised competence in at least one profession, yet they will be required to teach students in upper secondary school preparing them for all certificates in their subject cluster.

During the interviews many students expressed a deep sense of 'professional pride' (in Norwegian, *yrkesstolthet*) and viewed this as essential to their development as educators. One student described:

I have gained more professional pride, after I started studying, than before. And I see much more the importance of skilled workers. But that's because I don't come from an environment where there is a lot of professional pride as skilled workers, than when you are actually working in that job. [It has become] one of my banner issues, that one should get much more responsibility as a skilled worker and then. And be seen, receive professional development. The thing with professional pride as a skilled worker, there is very little of it in the healthcare sector. But that's not new. I wasn't proud before to say that I had received a vocational certificate in skilled labour. But today I am.

In another group, the researcher asked a follow-up question to see how the students saw themselves as part of the VET system:

Researcher: You all seem to be very oriented to your professions, still it is almost like you know you will contribute to change issues in your sectors when you are teachers, that you will help make the vocational workers for the future.

Student F: Yes, I hope we can be able to do that.

Another student explained:

We have a lot of knowledge, but now we must learn to transfer that. There are many things I have never thought about as a paramedic, like relations with the students, and their individual learning requirements.

Then a student followed up with:

There are things that are intuitive, for example that blackboard teaching is not very effective in vocational education and training. But now we have concretised why, and have a concept to explain why.

This analytical theme shows how in a professional context where everyone has the certificate in their background, students can develop a stronger sense of pride and acceptance for how the task of becoming a teacher is also about making tacit and implicit knowledge and skills available to pupils and apprentices to support their professional development. The Norwegian case study demonstrates that when VET student teachers feel their backgrounds are recognised and supported by the system and in their learning surroundings, they actively seek ways to integrate new scientific and pedagogical knowledge with their professional expertise.

Community and belonging through learning networks and collaboration

As mentioned, the students only meet face to face three weeks during each semester and must collaborate digitally the rest of the time. This practice was developed through the Covid-19-pandemic, and continued in its aftermath, as both educators and students found this way of engaging at times in ways that suit the groups better for the overall learning (see, e.g., Smepllass & Hylander, 2021), but also because it is a practical way of collaboration that saves time. Through the focus group interviews, all groups were encouraged to discuss their collaboration and whether this had contributed to their professional development. Although two groups reported conflicts related to uneven work distribution, they generally expressed satisfaction with their ability to complete tasks and receive positive feedback from teachers. In the other groups, students first of all highlighted how they relied on each other through the course and that the community they shared was pivotal for their learning. One student explained that they felt they were being trained for collaborative work in schools as

teachers: 'I feel that working like this is very good. Because this is how we are going to work in the future'. Another explained how they could also learn from each other: 'For me the greatest input has been through our sharing of experiences.' Given that all students were both part of one particular learning group, as well as part of a class cohort, it was not always clear whether they were referencing the broader community or the smaller collaborative groups. Still, the overall picture is that the interviewed students found the group to ease their work and strengthen their own efforts. One student remarked:

I think that if we did not have the collaborative groups, I would have struggled much more. Because the topics we have been through, are things you need to discuss with someone to gain some understanding.

Another student's statement shows how vulnerable adult learners can feel when they are challenged by the academic requirements:

When you asked us to read [one of the more difficult texts in the curriculum], we discussed whether it was a joke or not, because it made no sense. It became almost surrealistic, is this a test? We had a group chat and discussed it. But if I had received that text alone, without my group... I would have dropped out I believe.

Besides illustrating how students were able to speak freely and directly to their educators in the interview setting, this honest description shows how educators can sometimes unintentionally create uncertainty with their teaching design and even demotivation for some vocational student teachers if tasks become unreachable or confusing. In our experience as educators, the thresholds for students' tolerance can vary significantly within the same cohort. At the same time, as some students were struggling with the tasks and demands, the analysis reveals how the community of students were able to assist each other in these ordeals, and eventually ended up delivering well-defined tasks that received praise from the teachers. The focus group interviews underscored the ability of the student community to navigate complex discussions encompassing science, pedagogy, and the application of theoretical concepts to vocational practices. This collaboration not only facilitated the development of their teaching skills, but also fostered a sense of belonging and mutual support, which proved to be instrumental in their professional growth.

In summary, the findings from the focus group interviews indicate that the collaborative and community-oriented approach adopted in this VET teacher training programme played a fundamental role in students' ability to manage complex tasks and develop professionally as part of a learning community (Lave & Wenger, 1991). This approach illustrates the power of collective effort and peer support in adult learning, especially in vocational education teacher contexts.

Discussion and conclusion: Navigating science in vocational teacher preparation

In this study we asked: How can VET teacher training empower enrolled students to engage with science and research, and what can be learned from students' experiences to develop high-quality, research-based VET teacher training? We find that in a multidisciplinary learning environment, where students engaged with concrete, outcome-oriented tasks, there was a significant emphasis on the relevance of these tasks to the teaching profession. The approach fostered engagement among students, facilitating the development of their professional identity in line with Antera (2021) and Andersson and Köpsén (2019). This new professional identity is a blend of professional pride, lived experiences, and insights from both natural and social sciences. These findings respond to the first part of our research question by demonstrating how the engagement with practical and relevant tasks in a multidisciplinary setting empowers students to actively participate in and contribute to their learning, thereby enhancing their engagement with scientific and pedagogical research.

The study contributes to the understanding of research-based VET teacher training as a constructed scientific field that needs critical evaluation and professional reflection. It underscores that while VET and VET teacher training as combined academic disciplines need to integrate scientific knowledge and theories from various fields, it can also be viewed as a distinct discipline. In this context, educators and scientists within the multidisciplinary field of VET teaching must first recognise and understand the inherent divisions within these disciplines. Only then can they effectively bridge these gaps, aiding in the comprehensive development of VET teacher trainees, highlighting what can be learned from integrating diverse scientific knowledge into VET teacher training to develop quality and research-oriented programmes.

The diversity of students' backgrounds in the Norwegian case study necessitates a programme that meets varied professional development needs. Our analysis shows that when students are regarded as participants in a learning community that is characterised by open dialogue, both students and educators can learn from the diversity present in multidisciplinary VET teacher training. When students were invited to participate in our research regarding their professional development being part of a community, they assisted their educators in understanding how their course was experienced as useful. Furthermore, it gave valuable insights to how the educators could better design the various tasks and foster a positive learning environment in the future, contributing to the further development of the programme.

Students reported that pedagogical theory was useful to develop a professional vocabulary for their workplace, in their teacher practice as well as

in collaborative groups. We found that developing a common language for learning processes was experienced as inspiring and empowering. We also found that when both educators and students reflect upon what science means in education together, this creates a learning space where personal, academic, and professional development becomes embedded. These reflections and participations enhance the VET training environment, directly addressing how VET teacher training can empower these students.

The findings of our study lead us to conclude that the field of multidisciplinary VET teacher training, evolving in nature, requires a combination of natural sciences' desire for objective knowledge with the constructivist, humanist, and value-oriented perspectives of social sciences. Each discipline carries distinct traditions and principles, an example being the contrast between the 'context of discovery' and the 'context of justification' (see, e.g., Swedberg, 2012). For instance, an industrial teacher must grasp both the properties of materials and the social dynamics of learning, while a healthcare teacher needs to balance medical knowledge with pedagogical strategies. Merging these diverse scientific branches in VET teacher training is a complex task, necessitating a nuanced development of both knowledge and skills for educators and students alike. This complexity extends to understanding the research front in various disciplines, which is not a singular concept but rather a constellation of different 'research fronts' that should be integrated into a consistent educational experience.

As our figure initially illustrated, VET teacher training incorporates different branches of science with experience and VET competences to build an environment for professional learning and development (Hargreaves, 2000, 2013). Our study shows that in developing a critical science perspective, pedagogical theory as provided in the specific course has proven useful, particularly when students were encouraged to build upon their professional pride within a learning environment tailored to their specific progression from practitioners to teachers. Developing a critical perspective on the role of science in their fields is as crucial as understanding learning and teaching methods. Students' reflections reveal that dealing with these intricate questions from a philosophy of science standpoint also can be empowering, particularly when vocational training and experiences are acknowledged as valuable resources. We conclude in line with Hargreaves (2013), that describes how 'nudging' can be a useful approach to develop new knowledge as part of a professional community.

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Examination as knowledge development: A case study from vocational education and training

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Abstract

Post-graduate and further education can easily be overlooked as a contribution to collective knowledge and practice development in a field of practice. An overarching theme of this article is how the organisation of a post-graduate and further education initiative can influence collective knowledge in vocational education and training. This article aims to inquire about what teachers and school managers in vocational education and training experience with an examination format where the teachers conduct a university exam at their school, with their management as audience and potential participants. This case study is based on qualitative data from four focus group interviews with teachers and five focus group interviews with school managers at five vocational training schools. The teachers participated in the 'Vocational Teacher Training Initiative programme' (YFL) in Norway. 'The third space' is used as the overarching theoretical framework. Through a thematic content analysis, the findings were crystallised into three categories. 1) The examination format facilitated a proximity to practice. 2) Knowledge sharing appeared as concrete actions. 3) The examination format revealed new possibilities for co-creation with higher education. The result is that the examination format seemed to function as a bridge between conventional teaching practices in higher education and collective development in vocational education and training. Minor changes in the examination format appeared to open the door to what is termed 'a third space' between higher education and schools.

Keywords: the third space, examination format, vocational teacher training initiative, co-creation, proximity to practice, knowledge sharing



Introduction

The purpose of this article

The relation and cooperation between higher education institutions on the one hand and vocational education and training schools (VET schools) on the other, can be described as a challenging theory and practice-relationship. However, it could be possible to ensure productive approaches that might question our conception of the hierarchical structure of knowledge (with 'research' at the top) and thus the epistemological prerequisites for professional practice. This article aims to explore this by focusing on examination as a development link between higher education and VET schools and to highlight how changes in an exam form might transform the meeting between examiners and examined from assessment of learning to assessment as learning on an organisational level. In short, we are asking if minor changes in exam form might influence collective knowledge development in vocational education and training. The research question is: What experiences do VET teachers and school managers have with an examination form where the school managers observed and potentially took part in the exam setting of their VET teachers?

The case in question was an educational initiative where VET teachers from five VET schools participated as in-service teachers in an educational programme provided by a university college. The teachers were 'students' in the programme but are systematically referred to as 'VET teachers' in this text. The exam form invited school managers to observe and participate in the examination process where they experienced their staff members in new roles. It was not planned as such, but in a sense, 'examination' became a sort of 'intervention.'

A focal point is that the assessment situation – the exam – is a key element in the relationship between higher education and vocational education and training. Lejonberg et al. (2017) describe a model implying a dialogical relationship which makes it relevant to talk about a third space between higher education and vocational education and training (Daza et al., 2021, p. 2).

'Examination' is a type of assessment. The actual form employed might have been inspired by Raaheim (2019, p. 21) who describes three types of assessments: Assessment of learning, also named summative, assessment for learning, also named formative, and assessment as learning. Raaheim notes that the latter also is named 'sustainable assessment', or 'student-participated assessment', which is of particular interest to us. Raaheim's point is that conventional exam forms in higher education tend to be summative, not formative, or sustainable (Raaheim, 2019, p. 121).

The distinction between individual development and organisational development (French & Bell, 1999) is potentially broken down through this exam form. If so, higher education might, through the notion of the third space, have an easy,

but little-travelled path to organisational change in vocational education and training.

The structure of this article

In this introduction, we describe the context of the study before the research methodology of a qualitative case study with data from VET teachers and management teams is presented. After this, the concept of 'a third space' is presented as a theoretical concept, linking other theoretical approaches employed in the analysis, particularly 'knowledge development'. The result section focuses on the empirical answers and the findings are organised into three empirically founded categories: *proximity to practice*, *knowledge sharing*, and *co-creation*. Under each category, we present data from the VET teachers, and then data from the management groups in each of the five schools. In the discussion section, our findings are elaborated on and analysed through the lenses of the theoretical concepts we introduce before concluding with a summary of the study considering some implications the experiences might have for practical leadership and development in VET schools.

The context of the study

In 2015, the Norwegian government launched a new vocational education and training strategy. 'The Programme for Professional Development in Vocational Education and Training' (YFL) was a national, political initiative to raise the competence of vocational teachers through continuing education ('Yrkesfaglærerløftet - for fremtidens fagarbeidere,' Kunnskapsdepartementet, 2015). The intention was in general to improve professional quality, strengthen education, and prevent drop-offs in vocational education and training. The initiative was based on an understanding that workplace-based competence development had greater potential for school development than continuing education courses for individuals (Hargreaves et al., 2018; Helstad & Møller, 2013; Vangrieken & Kyndt, 2020). Sharing knowledge and skills development in the schools as learning communities were then key components of YFL. Individual learning should contribute to 'knowledge sharing and organisational development at the individual school level' (Utdanningsdirektoratet, 2016, p. 3). The continuing education programmes were to be developed and implemented in cooperation between higher education and the county councils (school owners responsible for the schools).

At the start of YFL, The Norwegian Directorate for Education and Training (Udir) stipulated that there should be at least three VET teachers from the same school in the same education programme and that compulsory work requirements should contribute to knowledge sharing among the staff (Udir, 2016). The Norwegian Directorate for Education and Training financed the

courses that were delivered by universities and university colleges but under agreements with the county councils as school owners. This gave the initiative a regional dimension.

Our institution, Western Norway University of Applied Sciences, delivered several continuing courses (15 ECTS) as part of the initiative. Among the learning activities developed and implemented in these courses was a type of testing in the VET teacher's practical setting. The university college arranged the exams as oral group examinations at the VET teacher's school, with their colleagues and the school management as spectators and potential participants in the exam situation. The overall aim was that it should be a reflective and learning meeting between everyone involved. The VET teachers were tasked with creating a research question related to an optional topic within the content of the course. Based on that question, they were supposed to share practice experiences and discuss these with relevant theory in mind. In addition, the VET teachers should present their thoughts on how the new knowledge could be used and further developed at their workplace. The exams in question were divided into three parts. First, the VET teachers had their presentation and everyone in the group had to participate actively. Then there was an academic conversation between examiners and VET teachers based on the presentation. In the final part, the examiners invited colleagues and school management to provide questions and comments.

Research methodology

Design and informants

The article is partly based on a larger study focusing on the specific educational initiative described in the context section (Sekkingstad & Glosvik, 2022). We define what is addressed in this article as a case study and the exam and examination format as the phenomenon in question (Flyvbjerg, 2006). Case studies are commonly used in various fields to provide an in-depth exploration of real-life situations, and it was decided to use this approach as we noted early on that the qualitative material on the question of the exam had an unusually positive tone from the informant side. We interpreted this according to Morgan (2019), who notes that a case might exemplify certain features of the social world in ways which prove valuable for further analysis, either of the same case or in many domains beyond the original study.

If a case is unique, it is not relevant to generalise from it (Grønmo, 2016). This is not so in this case study, as both the content and context are relevant for higher education, vocational education and training, and policymakers. Hence, we define it as a strategic case. Following Grønmo (2016) on this point, theoretical

generalisation is relevant to us. Therefore, we actively employ the chosen theoretical perspectives and terms as we discuss the results and draw conclusions.

Through focus group interviews, we wanted to elicit diverse experiences (Brinkmann & Tanggaard, 2020). Four groups with a total of 17 'students' (that is vocational teachers) and five groups with a total of 22 school managers from five upper secondary schools in Vestland County in Norway are included. The vocational teachers had as mentioned in the context section been taking part in 'The Programme for Professional Development in Vocational Education and Training.' We asked the principal of each school to recruit participants from his management team.

The main theme of the interview with all informants was their experiences with the examination form. In the interview with the school managers, we also asked how they could develop the VET teacher's contacts with the university college as a resource for the school's competence development in general. In both groups, we wanted to highlight strengths and challenges of the examination format. A flexible interview guide and agenda made it possible for the participants to influence the order and emphasis of topics, and we had the opportunity to ask follow-up questions (Thagaard, 2018). Author Dorteia Sekkingstad together with colleague Ingrid Syse conducted the interviews in the spring of 2018. The interviews with the VET teacher's focus groups lasted between 15 and 23 minutes, and the focus group interviews with the school managers lasted between 25 and 60 minutes. Audio recordings were made and the interviews were transcribed.

Analysis of the data material

We have conducted a thematic content analysis (Thagaard, 2018, p. 171). Through a hermeneutic approach, we have condensed and interpreted the material based on which meaning elements recur and which stand out. The analysis was divided into two phases. The first was characterised by an inductive approach where we systematised the material in an open coding phase. The three categories, *proximity to practice*, *knowledge sharing*, and *co-creation* grew from the empirical material. In the second phase, an abductive approach was employed as we used the notion of a third space to interact with the empirical categories (Postholm & Jacobsen, 2018).

Ethical and methodological assessments

The study was approved by the Norwegian Centre for Research Data (NSD) (reference 58144). We have been conscious and reflective about our roles as researchers, as one of the authors, Dorteia Sekkingstad, had a dual role as both a researcher and a teacher in the educational programme in question. One key

point is the advantages and disadvantages of conducting research in our field related to the issues of proximity and distance (Wadel, 2014, p. 225). A strength associated with proximity to the research field is knowledge and experience with the studied phenomenon. This can contribute to trust and effective communication in the interview situation, which can provide richer data. However, closeness to the field can also blind us, so that we do not ask questions or keep the necessary critical distance since we are studying ourselves. Hence, the dual role of teacher and researcher can contribute to reinforcing the asymmetrical relationship between the researcher and the participants. This may have caused participants to hesitate in providing critical input. We reflected upon this throughout the research process, and it has also been a topic in meta-communication with the informants. Our impression is that they were open and honest in their statements.

It is a strength that author Øyvind Glosvik did not take part in the teaching, examination, or interviews with the VET teachers. To ensure validity, both authors analysed the data and discussed the findings. During the analysis, we negotiated coding and categorisation in what Denzin (1989) refers to as 'interpretive interactionism'. Multiple interpretations provided a nuanced analysis process through intersubjective agreement. Through productive collaboration, we have created space for corrections and development of the analysis (Eggebo, 2020, p. 120). Such collegial validation can serve as a counter-balance to any blind spots and preconceptions. A strategic choice of theoretical framework has also contributed to a critical distance in analysis and discussion.

A third space as a conceptual approach

A conventional understanding of learning is associated with the individual as the fundamental unit of learning. However, the focus has shifted to social aspects of the learning processes. This has been called both the 'social learning theory' (Wenger, 1998) and the 'turn of practice' (Caspersen et al., 2017). The works of the Russian psychologist Vygotsky, through the concept of the zone of proximal development (ZPD), have had a profound influence on pedagogy and teacher training (Vygotsky et al., 1978). The framework for learning is perceived as just as important as the individual's benefit. The idea of 'the third room' or 'space' can be understood considering this shift.

Examination in the third space?

The term originates partly from Bhabha (1994) who argued that encounters with diverse cultures influence and shape our identities. The cultural geographer Soja (2010) speaks of 'home' as the first space and 'workplace' as the second (school, university). The third space becomes the meeting between these, or hybrid spaces

created by the interaction between the first and second. In the light of our context, learning is about the interaction between everyday knowledge in VET schools and academic knowledge represented by higher education institutions.

Different authors use the term 'third space' in slightly diverse ways, but not mutually exclusive. Gutierrez et al. (1995) and Gutierrez (2008) use it to describe processes in classrooms, where both teachers and students challenge hegemonic social processes through dialogical approaches not belonging to either home or school. Zeichner (2012) uses the term as a metaphor for the encounter between schools, higher education, and local communities. In this perspective, the third space might challenge our conception of the hierarchical structure of knowledge.

Three models for interaction between higher education and schools?

Teacher education programmes have been criticised for lacking relevance for practical teacher work (Lejonberg et al., 2017). An increased element of practice is a solution to this, and Lejonberg et al. (2017) argue for closer cooperation between teacher education programmes and practice schools. These authors present three models which are supposed to shed light on the relationship between teacher education and practice schools. According to Lejonberg et al. (2017), only one of them will function well as a framework for the development and improvement of practice.

The reflections on the three models can also shed light on the relationship between higher education and vocational education and training. The first model describes a conventional relationship between higher education and practice schools. The main premise of such an organisation (Lejonberg et al., 2017 pp. 70–71) is that the higher education institution has the formal responsibility and is the driving party in an asymmetrical relationship between the university college and the other party. The opposite is true in the second model, where the school or the authority in charge of the school requests teaching or competence development from one or more higher education institutions. This is also an asymmetric model, where the field of practice has greater influence over the relationship. Schools or school authorities define the need for knowledge to be provided by the higher education institution. The third model is based on a balance between higher education and practice schools. This so-called partnership model emphasises dialogue and shared interest in the implementation of the student's practice. The authors discuss how the renewal expected with this model must – for it to be successful – entail commitment and willingness to change on the part of both teacher training institutions and practice schools. However, if such change takes place among and between the partners, we need a working definition of knowledge development.

Knowledge development in the third space?

Nonaka (1994), referring to Polanyi (1983), splits the concept of knowledge into explicit and tacit. Explicit knowledge can be articulated, written, and stored, while tacit knowledge refers to subjective experiences, values, beliefs, and emotions more demanding to articulate. In a summative approach to examination, explicit knowledge would be in focus, while changes in tacit knowledge could be central in assessment as learning. However, Nonaka (1994) and Nonaka and Takeuchi (1996) write that in organisations, explicit and tacit knowledge are not separated but interact together in social relationships. The authors describe four modes of interaction or knowledge conversions in the SECI model: Through 'socialisation', an individual or a group transfers tacit knowledge to another individual. An often-used example is learning to master a craft or a technique by imitating an expert. Assessment for learning might be the form of examination associated with this type of knowledge transfer. Through 'internalisation,' the individual learns formal or codified (explicit) knowledge. We could associate this knowledge process with the assessment of learning. 'Combination' is a learning process where an individual, group, or organisation is linking explicit and implicit knowledge. In our context, we can understand both this process and 'externalisation,' or the making of implicit knowledge into explicit knowledge, in terms of assessment *as* learning.

When describing knowledge conversions Nonaka uses the Japanese word 'Ba' (Nonaka & Konno, 1998). A 'Ba' is a meaningful context, a shared space that serves as a foundation, a platform or a basis for knowledge creation and conversion through relationships. Spaces such as this can, according to Nonaka and Konno (1998), be physical, mental, or any combination of them. Nonaka (1994) and Nonaka and Konno (1998) describe four types of 'Ba' that correspond to the four stages of the SECI model, and each of them supports a particular conversion process or the processes of knowledge creation.

There might however be an overlap between the concept of 'a third space' and 'Ba' that is central for us. Daza et al. (2021, p. 2) proposed to use the term 'third space' to theorise about tensions and relationships between participants who, through meaningful interaction, enrich each other's experiences. This could follow the notion of 'Ba.' Specifically of interest is that Daza et al. (2021) point out how, through partnerships between higher education and schools, one can both better understand, but also develop and improve practice in schools. This is the understanding employed in this article, as we ask if examination could contribute to knowledge development. Daza et al. (2021) also said that all texts in their meta-study conceptualised – yet to varying degrees – the third space as a construct in which identities are in constant negotiation and where epistemologies converge. This is also our starting point when we ask if and how a change in examination form changes the epistemological and organisational processes in VET schools.

Daza et al. (2021, p. 12) analysed how thirty-six studies conceptualised and applied the idea of 'the third space' as a concept and model for professional practice in higher education from 2010 to 2019. The potential of the third space to support a less hierarchical structure in the relationship between schools and higher education was evident in all included studies. Both tensions and sustainability were described and discussed. 'Third spaces' however appeared utopian, as they are not merely organisational constructs, but seek to combine academic and experiential learning and various epistemologies for mutual professional development. In other words, they are challenging established structures and epistemologies and therefore cannot be taken for granted. The third space was a continuous process, not a goal to be achieved. Or we might ask: a potential context, a 'Ba'?

Results

We aim to explore examination as a development link between higher education and VET schools and to highlight how changes in an exam format might transform the meeting between examiners and examined from assessment of learning to assessment as learning on an organisational level. The research question is: What experiences do VET teachers and school managers have with an examination format where the school managers saw and potentially participated in the exam setting of their VET teachers? The answers are presented through three main categories and under each category empirical data is first presented from the VET teachers, then from the management groups. The categories are not mutually exclusive, as shown by the subsequent analysis and discussion. The focus groups comprising teachers have been assigned the names T1, T2, T3, and T4. The focus group comprising school managers have been named M1, M2, M3, M4, and M5.

Proximity to practice

The VET teachers found it meaningful to participate in an education programme where they were able to take challenges in their practice as their point of departure, and where the exam provided an opportunity to reflect on how they had developed and could further develop their practice through various measures.

A deeper understanding of the justification of practice

The importance of analysing one's practice with relevant theory from the syllabus was emphasised, and the exam created motivation to read theory: 'The more you read [...] the more it creates a curiosity,' said T1. The examination form required reading, writing, and reflecting jointly on relevant issues from practice.

Through the exam preparation, they felt they were in a learning process. The VET teachers found that they developed a deeper understanding of the theoretical justification for their practice: 'We had to know the subject matter,' told T1. In comparison, VET teachers pointed out that through written 'home exams' one usually just 'pastes the subject matter,' as T2 coined it. Oral exams in groups meant that 'you get to say much more' and 'you get the opportunity to share experiences you have gained through the programme,' T2 continued. Some say it this way: 'You can kind of colour it in a different way when you have an oral exam' (T1). In this way, the examination form provides opportunities for putting words to one's own experiences, rather than the reproduction of knowledge.

Management notes a professional boost among the VET teachers

The managers were in general not much involved in the teacher's assignments as students but met them through the exam. Based on this, they emphasised that the continuing education and examinations were a professional boost for the VET teachers: 'They have reflected, they have worked on issues they are concerned with' (M2), and this helped the teachers develop their practice. The managers emphasised the content of the VET teachers' presentations: 'It was exciting to listen to. I like the exam form' (M1). M2 elaborated on this as follows: 'It is topical. The [college teachers] use the latest relevant knowledge,' (M2). The managers noted the close connection between the content of the presentations related to focus areas and development plans at their schools.

Knowledge sharing

The VET teachers talked about positive experiences of sharing knowledge in the examination group and with colleagues and managers during the exam: 'Then you may become more confident in expressing your own opinions [...] one dares to expose oneself more, after such a setting' (T3). This helps to build confidence in one's competence: 'Being able to trust one's thoughts, even if one receives feedback that another person looks at things a little differently' (T3). In addition, listening to others offers the opportunity to 'learn from others' (T3). The VET teachers feel that they have 'become better at communicating with colleagues [...] and achieve a good dialogue and good cooperation,' according to T2.

'... a little scary ... a little proud!'

Some expressed that they had been entirely positive about presenting the exam to colleagues and management at their school, while others had found it both frightening and positive: 'It was a little scary in front of colleagues, but I feel a little proud, to be allowed to stand here and show that I have done something [...]. When it comes to the result, I feel pride', as T4 told. Several mention that it felt safe to sit the exam in a group: 'You know that you have the others with you.'

You have advisors around you' (T4). Having a good colleague with you can also be important: 'I knew she was going to see me. So, it can also be a safety factor' (T4).

The VET teachers perceived positive feedback from the examiners during the exam as constructive: 'I was never a bright light at school myself, and now we got feedback on a good setup and good language' (T3). They perceived sharing knowledge and experiences with colleagues as educational. One of the VET teachers illustrated this by referring to the learning pyramid: 'What is at the top is teaching others. Then you learn more yourself' (T1).

'He did not know that he has such good employees'

Experiences with knowledge sharing through exams motivated working on the development of practice: 'I think the threshold is lower now for [...] video filming our teaching, to see what we look like in teaching contexts' (T3).

Sharing theoretical knowledge with colleagues was a new experience: 'I see it as a good sharing arena [...] and where to have a dialogue about this' (T2). But the management needed to be involved in the exam: 'Great that the principal was present' (T3), and 'that we get to show our research to the management' (T2). Through the exam, the management can also experience what competence the VET teachers acquired through the programme: 'He [the principal] was a little surprised. He did not know that he had such good employees,' T1 said.

When the VET teachers refer to the exam as an arena for knowledge sharing, they however make it clear that the exam 'is just the start of knowledge sharing' (T1). If it is to be systematised in the workplace, the management must facilitate further knowledge sharing.

The importance of being present

The managers also perceived the exams as good arenas for knowledge sharing: 'The examination form makes it possible to share in a different way than through a written exam [...] Then it was quite private [...], but with this form, things get shared in a way you have not seen before' (M3). They emphasise that knowledge sharing across disciplines and departments can inspire: 'When the VET teachers present different ways of working, there are members of the staff who find it exciting' (M4). Informants also pointed out that a culture of sharing across subjects is important for teachers to be able to do a decent job: 'This is particularly important now because the teachers are not as interdisciplinary as they used to be' (M2). The managers also use the word 'learning arena' when they argue that more staff members should have been present and involved (M3).

All managers present during examinations emphasised the importance of being there and that department heads also should take part. The county council should have demanded all management to be present during the exam because:

'It took a while before I understood this form of teaching [...], we could have received better information from the county council [...] we should have been made aware of how important it was that the management team was involved and that we should bring the [other] teachers with us' (M4).

The managers saw that the examination form could structure development work: 'We have always been conscious of competence development among the teachers [through courses], but I was not aware of this exam situation, that we could start already with this' (M4). Once the managers had gained experience with the examination format they would see things differently. 'I can easily address it [...] So that all the department heads can use the teachers [i.e., in more structured ways]', said M4.

Experiencing a culture of sharing

The managers agree that the exam gives the staff 'experiences with a culture of sharing' (M5) and that the exam can serve as a starting point for the development of knowledge sharing at the workplace. But this needs to be worked on: 'How we could formally incorporate this into our structure when we have meetings, departmental meetings, work on development, etcetera. [...] We have talked a lot about developing this in the future' (M3).

Collaboration and co-creation

All informants describe cooperation in the exam groups as valuable, and the exam presentation is a result of the collaboration: 'We all provide input' (T4). Knowledge sharing and competence development take place through interaction: 'You receive direct feedback that makes you think new thoughts' (T1). It is especially valuable to collaborate across disciplines and departments. The VET teachers gain access to new professional perspectives and 'see that it is okay to cooperate' (T1). Staff members create new relationships and lower the threshold for cooperation. In their collaboration, VET teachers are keen to share experiences about what works: 'It can quickly become a negative focus on certain pupils, so we have to try to twist it', said T3 and went on to say that through this collaboration one had started communicating better with others, and that it 'has given us a different view, and I think it will probably be transferred to colleagues [...] things don't happen in a snap, but over time such things will probably affect the culture, perhaps' (T3).

'Reduce the number of balls in the air'

About the interaction between them and colleagues and management during the exam, T1 says: 'I thought it exciting to listen to the questions from the audience. How they thought, and how they perceived our presentations. And then there were things you may not have focused on yourself. This was a lot of fun'. The

informants experienced a cheerful outlook from the management present during the exam. 'I think that we can bring something back to the school and that it gives management perspectives that things can be done differently' (T1). The VET teachers seemed to have acquired new knowledge that may be important for the school's focus areas. They see the importance of using the school's development plan actively: 'We should have had the development plan as a fixed point at all the collaborative meetings [...]. For reflection and for the way forward, not just as a vision left in a drawer. I would have done that if I were the principal' (T2). The development plan can form the basis for fewer goals: 'I think we could have focused on things such as teacher conversations, and just focused on exactly that,' said T2. The school must not have too many areas of focus: 'I would have had fewer things we should be working on because I feel like the school has too many balls in the air. Reduce the number of balls,' as T4 formulated it. The focus areas should be relevant 'and something we want to work on [...] Maybe the management doesn't have any insight into this?' (T4).

Examiners as dialogue partners

The VET teachers referred to the examiners as dialogue partners during the exam with a two-way communication about a common topic, which helped them to present what they had worked on: 'what we are concerned with and what we have learned' (T3). One of them suggested that cooperation between VET teachers and the university college (examiners) should continue after the exam: 'After four months, you can come back to us and ask: [...] Have you used any of this? An after-check,' said T4 and laughed. The university college can have an important function by following up the dialogue with both VET teachers and management teams the following year, as a resource in a collaborative learning community.

The VET teachers perceived the comments from the examiners as appreciative. Some of the VET teachers referred to themselves as the 'industry boys' (i.e., blue-collar workers) and said they could feel inferior when comparing themselves to colleagues who talked about taking a master's degree or had other plans for career paths. In this context, it was a special experience to receive appreciative comments from the examiner: 'Then we got such good feedback from the examiners' (T3). It showed something to the colleagues. In a written exam with a focus on summative assessment, on the other hand, the target group for the presentation will only be the examiner: 'It will not be a collaboration' said T1.

However, oral exams in groups also present challenges: 'It requires quite a lot of work [...] Not much time has been allocated for collaboration' (T1). It is time-consuming to collaborate, and it can be challenging to find common time in a busy school day. Therefore, the VET teachers recommend no more than three to four participants in each group. In the groups, it can also be a challenge to decide

what to focus on in the presentation: 'I felt that I cut through [...] even though there were a lot of good points,' T3 told us.

The VET teachers highlighted several reflections when asked how many colleagues should be present during the examination. One advantage of having the entire staff present is that the school could develop a culture of sharing throughout the organisation. One disadvantage might be that it then becomes difficult to set up good dialogues between VET teachers and colleagues during the exam. The conclusion seems to be that the group of colleagues attending should not be too large.

One remark highlighted by the managers was the value of the discussions during the exam between those present. An example is the development and use of interactive logs:

It was special to hear about the projects of those responsible for the placement of pupils in companies in vocational specialisation. How communication between teacher, company and VET teacher has improved. And then there was a discussion in the audience about what was positive, negative, and challenging. (M3)

It seems as if the school managers found it particularly valuable to hear examples of practice development, which led to comments and questions between the audience, and between the audience and the VET teachers.

More work-place based competence development

The management groups mention the diverse cultures at their workplace and that it could be important to get external input from the university college in development processes at the school: cooperation and help to initiate collegial mentoring were mentioned by M5 as examples. The managers also envisage the school as a research arena, through action research towards school development and involving those who have taken further education: 'Staff from the [university college] can supervise,' said M5. However, the collaboration can also include schools contributing their ability to the university colleges. It was emphasised that the VET schools had valuable expertise that could benefit the colleges. The cooperation had to go both ways.

The main findings in short

This form of examination facilitates proximity to practice in the sense that the VET teachers give an account of their own experiences and thoughts, rather than reproducing external knowledge. VET teachers nevertheless perceived the examination format as labour-intensive. It exposed school managers directly to relevant knowledge through their employees' reflections. This not only offers greater insight into knowledge and knowledge acquisition but also insight into the employees' practices as reflecting teachers.

It also appears that this way of presenting knowledge in one's professional community promotes the VET teacher's individual academic and professional self-confidence, which then also probably promotes a sharing culture. There is reason to believe that this is visible for managers, and it is conceivable that it highlights aspects of a knowledge management role not normally emphasised. We might interpret this as knowledge-sharing and that knowledge-sharing culture appears as concrete actions and not just abstract visions.

In the context of co-creation between higher education and VET schools, it seems as if VET teachers interpret interaction with higher education not only as 'education' but also as professional development. For managers, this could mean that new arenas for knowledge development across departments are appearing. Managers are asking for closer cooperation between the field of practice and the university college through development projects. We will discuss these findings further in the next section.

Discussion

Given the introduced theoretical approaches, how can we interpret the VET teachers' and school managers' experiences?

Proximity to practice reveals relevance for learning

With the SECI model (Nonaka, 1994) in mind, we could ask if the examination form converts tacit knowledge from the teacher into new explicit knowledge in the form of a formal pedagogical frame and language. If so, we are witnessing an externalisation process where the teachers can use dialogue to formulate local images, metaphors, and local contexts. Gheradi (2000) discusses whether such processes can only succeed if tacit knowledge is disembedded through a reflection-on-action process. One could question if the examination format with participants from the university college creates a distance that makes this possible.

Nonaka et al. (2006) also call this knowledge creation process 'crystallisation', where knowledge is 'sophisticated' or 'synthesised' into relevant images, models, or mental maps for the organisation. When knowledge is accessible to the organisation in this sense, it is no longer tacit, but explicit. It is then possible to couple it with other kinds of explicit knowledge accessible in, or for, the organisation. The SECI model is naming this combination, and as organisational members are part of the examination as an externalisation process it is likely that this also facilitates knowledge conversion. One could ask if the managerial levels of the VET schools now see that new strategies, tactics, and operational modes are becoming available.

Knowledge sharing in a professional community

The study programme in question represents several layers for potential learning, or rather it is an arena where several learning situations occur. The first is the subject courses, which assemble all the VET teachers. The second one is the individual VET teacher's reflection. A third is the relationships among participants from several VET schools, the fourth is the local group from each school, and a fifth is the potential link between the actual study activities and the VET teachers' daily work. A sixth is the collective school level through the examination. In all these potential situations knowledge sharing might take place. We will, however, note their professional nature and hence the role of identity forming.

As mentioned in the introduction, the term 'a third room' originates partly from Bhabha (1994). This author argues that encounters with cultures shape and influence identities. It is known that teachers in VET schools live with the tension between an identity as skilled artisans and as teachers (Dalton & Smith, 2004; Mårtensson et al., 2019). The data we have analysed here on examination suggest that the latter identity is promoted.

Another side of this is that individual learning processes in daily working life, are in general invisible to colleagues. This examination form, however, creates situations where individuals can show mastery of new knowledge. This can, of course, strike both ways, but as we have pointed out, learning and mastery in this arena become something concrete and linked to both individuals and organisations. Since this is a group exam, the collective voice of the team in question will, as some of our data seems to suggest, dominate over critical voices among staff members.

Through the examination form, these learning processes have somehow become public, and they show both how colleagues acquire new knowledge and how new knowledge can be relevant to their organisation. We do not have much data on this, but it is possible to ask if these exam teams also exemplify how a VET school can become a learning organisation, more than a knowing organisation, to use such a phrase.

Co-creation for knowledge development

We found the category of co-creation in two senses in this study. The first is that the examination form promoted a discourse challenging existing interaction between internal disciplines and departments. This could be a stepping stone towards organisational learning or organisational development, but as mentioned above, depending on both local management practices and a functioning development plan. The second finding in this category was related to the context of co-creation between higher education and the VET schools. The VET teachers interpreted interaction with higher education not only as

‘education’ but also as professional interaction. This challenges existing, internal relationships as new arenas for knowledge development and sharing across disciplines, departments and higher education were emerging. Some managers observed this and asked for closer cooperation between their schools as a field of practice and the university college through new development projects. We could hence ask if the examination form opened a door to ‘the third space’.

In other publications from the same data set as the present one, Sekkingstad and Glosvik (2022) observed three leadership practices among the five included management teams: One of the practices seemed to view the individual teacher as the learning unit. This represents a conventional concept of learning. The other two, however, highlighted the social and organisational aspects of the learning processes and this observation as such represents a turn towards ‘social learning theory’ (Wenger, 1998) and the ‘turn of practice’ (Caspersen et al., 2017). From such perspectives, the framework for learning is just as important as the individual’s benefit, and since the framework in this study is comprised of the higher education institution, the idea of a third space became relevant. As mentioned, Soja (2010) spoke of ‘home’ as the first space and ‘workplace’ as the second (school, university). The third space becomes the meeting between these two, or hybrid spaces, as created by the interaction. In our context interaction between everyday knowledge in VET schools and academic knowledge represented by the higher education institution is in focus. We have answered that this new form of examination could bridge the gap between teaching initiatives with a focus on summative assessment and collective development in vocational education and training. We are inclined to assert examination as a development link between higher education and VET schools. As we have concluded, changes in examination format influenced collective knowledge development and indeed opened the door to the third space in these schools!

However, the Norwegian Directorate for Education and Training quickly closed it again. A basic premise in ‘The Programme for Professional Development in Vocational Education and Training’ had been the understanding that workplace-based competence development had greater potential for school development than continuing education courses for individual VET teachers. As said in the introduction, individual learning should contribute to ‘knowledge sharing and organisational development in each school’ (Udir, 2016, p. 3), and it was the Norwegian Directorate for Education and Training that stipulated there should be at least three VET teachers from the same school in the same continuing education course. The logistical challenges this created for the VET schools combined with limited academic offers from the colleges meant, however, that not all teachers could participate in courses that interested them.

Because of this, the Directorate changed the basic premise of the Programme for Professional Development in Vocational Education and Training. After 2019

anyone interested in participating in continuing education in YFL could apply for all courses. As mentioned in the Context section, the courses through agreements with the school authorities had at the start a regional dimension, but an unintentional consequence of the change made them now national. This increased the number of VET teachers in each course, but it was much more difficult to organise them with close ties between colleges and schools. It also became impossible for Western Norway University of Applied Sciences to be present for the exam at each school. The college made attempts to safeguard the intentions through simpler schemes, yet the door to the third room was no longer open. At best, it is now ajar.

Some theoretical reflections

Daza et al. (2021, p. 12) concluded that the concept of a 'third space' appeared utopian. Our conclusion follows Daza et al. (2021) on this point: The third space is a continuous process, not a goal to be achieved. What we observed seems to be a development of productive and sensible ways of cooperation between higher education and VET schools. The examination format combined academic and experiential learning and various epistemologies for mutual professional development. Without the theoretical lens of a 'third space' it would however have been difficult to observe and analyse this interaction.

It has also been useful to complement the term with Nonaka's 'Ba' since this approach emphasises multiple - and competing - contexts for knowledge creation and knowledge sharing within and between organisations. Nonaka (1994) mentions four basic contexts: *originating* Ba is the space where organisational members share feelings, emotions, experiences, and mental models. It corresponds to 'socialisation,' or transference of tacit knowledge from an individual or a group to another individual. As indicated in the introduction, assessment *for* learning might be the form of examination associated with this type of knowledge transfer, but it is not what we have observed in this study. Neither seemed *exercising* Ba to be relevant this context supports learning for the individual, as it is the category for conversion of explicit to tacit knowledge. As noted in the introduction, we could label assessment *of* learning as the type of examination associated with this process, and classroom teaching could be aligned with this Ba.

In contrast, 'the third space' seems to correspond well with a combination of *interacting* Ba and *cyber* Ba. In the first of these, there is an externalisation of individual knowledge, and in the second, the possibilities of linking (combining) this knowledge with other, externally formulated knowledge. We observed both of these processes in this study and understand the examination format as an assessment *as* learning. It also aligns with the notion of organisational learning.

Conclusion

The research question in this article concerns an examination format where the school managers observed and potentially took part in the exam sitting of their VET teachers. It seems as if this examination format allows VET teachers to share personal experiences and reflections rather than repeating external knowledge. Despite being beneficial, teachers find it labour-intensive. It helps school managers gain relevant insights from their employees' reflections, enhancing knowledge and understanding of teaching practices. This approach boosts teachers' confidence. Enhanced knowledge-sharing culture is highlighted, promoting concrete actions over abstract visions. Interaction with higher education fosters professional growth for VET teachers and opens new avenues for knowledge development across departments, prompting closer collaboration between practice fields and universities through development projects.

It was possible to build a development link between higher education and VET schools. Minor changes in the type of exam seemed to influence collective knowledge development in vocational education and training. The examination form opened the door to a third space, even if it was quickly closed again.

This raises several important questions. One is how managers in this type of school can exercise knowledge management. In other contexts, Sekkingstad and Glosvik (2022) have discussed some other findings from the same data material. They found that the practice of 'Daily operations' was the dominant form of knowledge management. However, there were fragments and traces of another practice where the focus was more on 'Systems and plans,' rather than everyday survival. A third practice Sekkingstad and Glosvik (2022) named 'systemic'. This is more concerned with learning for the future than knowledge needed today. The main finding was that the first management practice placed the individual teacher at the centre of knowledge processes, the second focused more on the school as an organisation, and the third on the pupils' learning and needs. The practical form of leadership that predominated in these schools had therefore consequences for collective learning, general management being thus also knowledge management.

It follows that one should look further into the potential link between the employees' self-development through such educational initiatives and the schools' development plan. This was a topic raised by several of the informants. The question is whether a dynamic aspect of the development plans appeared to be lacking, as the VET teachers through the examination reflected on further professional development in their schools. An answer would demand more research on leadership practices and functional relations between higher education, VET schools, and school authorities.

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Grensekryssing i yrkesfaglærerutdanningen: Betydningen av studentenes utviklingsprosjekter

Boundary crossing in vocational teacher education: The role of
students' development projects

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Abstract

This article aims to explore how vocational teacher students' work with development projects can create coherence between learning in the university and learning in teaching practice. Previous research indicates that students often perceive a lack of coherence between the academic knowledge culture in the university and the experiential knowledge they encounter in teaching practice. The study uses *boundary crossing* as a theoretical approach, and the results are based on interviews with vocational teacher students. The results reveal that their work with development projects strengthen programme coherence by linking the learning arenas university and teaching practice. The development projects also acted as boundary objects, facilitating the integration of the different knowledge cultures and practices. This study contributes to understanding the potential of development projects to create coherence between university and teaching practice in vocational teacher education. The results suggest the need for closer collaboration between universities and schools in supporting vocational teacher students' work on development projects to enhance boundary learning.

Keywords: coherence, vocational teacher education, development projects, teaching practice, boundary crossing, boundary objects



Innledning

En sentral del av både allmennlærerutdanningen og yrkesfaglærerutdanningen i Norge foregår i pedagogisk praksis, og utdanning er derfor et samarbeid mellom universiteter/høgskoler og skoler hvor lærerstudentene gjennomfører sin pedagogiske praksis. Manglende sammenheng mellom disse læringsarenaene, dvs. mellom undervisningen på campus og erfaringer lærerstudentene gjør i pedagogisk praksis er imidlertid en utfordring i lærerutdanningen i Norge og internasjonalt (Canrinus et al., 2015; Darling-Hammond, 2006; Raaen & Thorsen, 2020). Forskningen tyder på at lærerstudentene opplever manglende samsvar mellom kunnskapen som blir vektlagt på universiteter/høgskoler og i praksisskolene. Samarbeidet mellom de to læringsarenaene synes for lite utviklet, og det er overlatt til lærerstudentene å skape meningsfulle sammenhenger mellom dem (Canrinus et al., 2015; Raaen, 2017). I Norge viser også evalueringer av lærerutdanningene gjennomført av Nasjonalt organ for kvalitet i utdanningen (NOKUT) de samme utfordringene med manglende sammenheng, samt behov for styrking av norske lærerutdanninger (Kunnskapsdepartementet, 2017).

Læreres profesjonsutøvelse er kompleks og er preget av samspill mellom ulike kunnskapsformer (Smeby & Mausethagen, 2017). Profesjonskunnskapen vil derfor bestå av en syntese av kunnskapsformer og kommer til uttrykk i profesjonsutøverens handlinger (Gilje, 2017). Lærerstudenter må derfor kunne nyttiggjøre seg den erfaringsbaserte kunnskapen de møter i pedagogisk praksis og den teoretiske kunnskapen de møter på campus. Den teoretiske kunnskapen i lærerutdanningen vil være ulike former for forskningsbasert disiplinkunnskap som pedagogikk, psykologi og sosiologi. Disse to kunnskapsformene er også kjent som hvordan-kunnskap og at-kunnskap – *knowing how and knowing that* (Ryle, 2009).

Begrepet sammenheng (*coherence*) brukes på ulike måter som belyser forskjellige aspekter ved sammenheng i profesjonsutdanninger (Heggen et al., 2015). I denne artikkelen anvender vi begrepet intern sammenheng – *programme coherence* (s. 80) om hvordan læringsarenaene campus og pedagogisk praksis i yrkesfaglige utdanningsprogram i videregående skole er integrert i yrkesfaglærerutdanningen. Ved å anvende konseptet grensekryssing, *boundary crossing* (Akkerman & Bakker, 2011) som teoretisk rammeverk, kan vi undersøke potensielle utfordringer og muligheter med å etablere sammenheng på tvers av ulike kontekster og kunnskapskulturer i yrkesfaglærerutdanningen. Vi vil også undersøke om yrkesfaglærerstudentenes arbeid med utviklingsprosjekter kan fungere som et grenesobjekt *boundary object* (Star & Griesemer, 1989) som bygger bro mellom studentenes læring i pedagogisk praksis og på campus.

De fleste studiene som har undersøkt den interne sammenhengen i lærerutdanningene er gjennomført i allmennlærerutdanningen. Imidlertid viser også studier som er gjennomført i yrkesfaglærerutdanningen at yrkesfaglærer-

studentene kan oppleve mangel på sammenheng mellom undervisningen på campus og pedagogisk praksis (f. eks. Berglund et al., 2020; Dahlback et al., 2018; Schaug & Herudsløkken, 2019). Studiene synliggjør også behov for tettere samarbeid mellom partene i utdanningen basert på felles forståelse av yrkesfaglærernes arbeidsoppgaver og kvalifikasjonsbehov.

I Norge tilbys to ulike yrkesfaglærerutdanninger, et treårig bachelorprogram – yrkesfaglærerutdanningen (YFL, 180 studiepoeng) og en ettårig praktisk-pedagogisk utdanning for yrkesfag (PPU-Y, 60 studiepoeng). PPU-Y kan også gjennomføres på deltid over to år. Studien som denne artikkelen bygger på, er gjennomført på PPU-Y deltid, og derfor er det kun denne utdanningen vi beskriver.

PPU-Y omfatter pedagogikk, yrkesdidaktikk og 50 dagers pedagogisk praksis i et yrkesfaglig utdanningsprogram i videregående skole. Hensikten med pedagogisk praksis er utvikling av pedagogiske og yrkesdidaktiske kompetanse, slik at de fremtidige yrkesfaglærerne kan mestre det mangfold av oppgaver de vil møte i arbeidslivet. Pedagogisk praksis er en integrert del av utdanningen og praksisskoler og universiteter/høgskoler betraktes som likeverdige læringsarenaer (Universitets- og høgskolerådet, 2018). Det oppnevnes en praksislærer som har relevant yrkesbakgrunn og minst tre års undervisningserfaring. Praksislærer er ansvarlig for veiledning av yrkesfaglærerstudentene før og etter undervisningsaktiviteter i klasserom og verksted og skal også legge til rette for involvering i oppgaver som for eksempel vurdering av elevarbeider og deltakelse på møter i lærerkollegiet. Opptakskravet til studiet er minimum to års yrkes- eller profesjonsteoretisk utdanning fra fagskole, universitet eller høgskole (for eksempel sykepleie- eller ingeniørutdanning) og fire års arbeidserfaring fra et yrke som er relevant for utdanningsprogrammet. Vanligvis er i underkant av 50% ansatt som yrkesfaglærere når de gjennomfører studiet (Wiggen et al., 2022).

Å kunne drive utviklings- og endringsarbeid og arbeide systematisk og prosessorientert med utvikling av egen praksis er en vesentlig side ved yrkesfaglærerens kompetanse (Hiim, 2016). Det er derfor nedfelt i de nasjonale retningslinjene for PPU-Y at utvikling av endrings- og utviklingskompetanse står sentralt (Universitets- og høgskolerådet, 2018). Yrkesfaglærerstudentene skal derfor gjennomføre et utviklingsprosjekt som integrerer pedagogikk, yrkesdidaktikk og pedagogisk praksis i løpet av studiet (s. 15), og det påpekes at utviklingsprosjektet vil kreve et utvidet samarbeid mellom universitet og praksisskole. Ved vårt universitet er det fastsatt at utviklingsprosjektet er en del av eksamen og at det skal gjennomføres i 3. praksisperiode, dvs. i høstsemesteret i 2. studieår for deltidsstudenter.

Også i den danske yrkesfaglærerutdanningen – *diplomuddannelsen i erhvervs-pædagogik* (DEP) – er det en målsetning at studiet skal bidra til at studentene skal kunne arbeide med utvikling av praksis (Duch et al., 2022). Til forskjell fra den

norske PPU-Y-utdanningen, er samtlige som gjennomfører yrkesfaglærerutdanningen i Danmark ansatt som yrkesfaglærere på en skole. Gjennom å undersøke hvordan utviklingen av praksis kan foregå som en del av arbeidet med avgangsprosjektet i utdanningen fant Duch et al. (2022) at utvikling av praksis kan handle om utvikling av undervisningen eller utvikling av organisasjonen. Yrkesfaglærerstudentene opplevde at det var krevende å jobbe med prosjekter som hadde som målsetning å utvikle organisasjonen fordi dette krevde involvering av andre aktører. Resultatene fra denne studien kan tyde på at det kan være krevende å få til det ønskede samarbeidet med praksisskolen slik det er forutsatt fra det norske Universitets- og høyskolerådet (2018).

Denne artikkelen bygger på erfaringene fra et pedagogisk innovasjonsprosjekt som ble gjennomført i en deltidsklasse på PPU-Y. Hensikten med innovasjonsprosjektet var å prøve ut ulike tiltak med målsetning å skape bedre sammenheng mellom læringsarenaene i yrkesfaglærerutdanningen. Eksempel på slike tiltak er undervisning på campus av representanter fra praksisskolene og invitasjon av praksislærerne til prosjektpresentasjon på campus. Vi som praktikerforskere har systematisk prøvd ut og evaluert ulike tiltak i forbindelse med forberedelsen til og gjennomføringen av utviklingsprosjekter i pedagogisk praksis. Hensikten med denne artikkelen er å bidra med kunnskap om hvordan yrkesfaglærerstudentenes arbeid med utviklingsprosjekter kan bidra til å skape meningsfulle sammenhenger mellom læringsarenaene i yrkesfaglærerutdanningen. Artikkelen belyser følgende forsknings spørsmål:

- Hvordan kan yrkesfaglærerstudenters arbeid med utviklingsprosjekter skape sammenheng mellom læring på universitet og læring i pedagogisk praksis?

Datagrunnlaget for artikkelen er intervjuer med yrkesfaglærerstudenter. I det følgende presenterer vi tidligere forskning på sammenhengen mellom læringsarenaene i lærerutdanningen. Deretter redegjør vi for konseptet grensekryssing og hvordan det er anvendt i artikkelen. I kapittelet om forskningstilnærming beskriver vi det pedagogiske utviklingsprosjektet, datagrunnlaget og analyseprosessen. Deretter følger en presentasjon av resultatene, før vi avrunder med en avsluttende drøfting.

Tidligere forskning

I forskningsgjennomgangen legger vi vekt på å presentere forskning som bidrar til å belyse hva som kan være hemmende og fremmende for studentenes opplevde sammenheng mellom de to læringsarenaene campus og pedagogisk praksis. Vi presenterer også forskningsbidrag som kan synliggjøre om det er spesifikke utfordringer med sammenhengen i yrkesfaglærerutdanningen.

En av utfordringene i lærerutdanningen er at studentene ikke opplever at det er sammenheng mellom den teoretiske kunnskapen de møter på campus og den erfaringsbaserte kunnskapen de møter i pedagogisk praksis (Raaen & Thorsen, 2020; Smeby & Mausethagen, 2017). Manglende sammenheng kan blant annet handle om at studentene ikke opplever at undervisningen har gitt dem de konkrete *verktøyene* de trenger i undervisningen (Solomon et al., 2017). Studenter kan oppleve det som krevende å ta i bruk den pedagogiske teorien som ble formidlet på universitet/høgskole i den praksisen de møter ute i skolen (Raaen, 2017). Studenter kan etterspørre mer innhold som direkte kan anvendes i praksis (*instruering*), og når teorien ikke gir studentene de forventede oppskriftene for praksis, kan dette føre til at de er kritiske til teorien (s. 111).

Også en evaluering av danske yrkesfaglæreres utbytte av *diplomutdannelsen i erhvervspædagogik*, viste at studentene kan ha en forventning om at lærerutdanningen skal ha et større fokus på konkrete metoder eller "oppskrifter" som kan anvendes direkte i undervisningen (Danmarks Evalueringsinstitut, 2015, s. 45). Studentene kan også erfare at det de lærer i pedagogisk praksis stemmer lite overens med læringssynet som vektlegges i undervisningen på campus (Hammerness, 2006). Denne svake sammenhengen fører til at det er vanskelig for studentene å utvikle en helhetlig profesjonskompetanse (Hatlevik & Havnes, 2017).

Forskning på ulike lærerutdanningsprogram viser at det er viktig at det etableres en felles forståelse mellom universitetslærere, praksisveiledere og studenter om hensikten med, og gjennomføringen av pedagogisk praksis (Canrinus et al., 2015; Darling-Hammond et al., 2005). Dette innebærer samarbeid og kontinuerlig kontakt mellom representanter fra de to læringsarenaene. Et annet aspekt som styrker studentenes opplevelse av sammenheng, er at de erfarer at lærere i praksisskolen anvender de samme læringsteoriene og strategiene i opplæringen som de har blitt presentert for i undervisningen på campus (Canrinus et al., 2015, s. 11). I den norske allmennlærerutdanningen har det vært gjort forsøk med hvordan aksjonsforskningsprosjekter i pedagogisk praksis kan bidra til å skape sammenheng mellom forskningsbasert og erfaringsbasert kunnskap. Studentene som deltok i studien la vekt på at de erfarte sammenheng mellom teoretisk kunnskap og den konkrete undervisningspraksisen, samt at de har fått erfaringer med et verktøy for videre profesjonsutvikling (Ulvik, Riese, et al., 2018).

Den nyeste evalueringen av praktisk pedagogisk utdanning (PPU) i Norge, viser at andelen fornøyde studenter "er høyere blant studenter på PPU for yrkesfag enn blant studenter på PPU for allmennfag på så å si alle spørsmålene" (Wiggen et al., 2022, s. 7). Studentene på begge utdanningene er imidlertid samstemte om at de er minst fornøyd med forberedelsene i forkant av praksisperiodene. Cirka 50% av studentene på PPU-Y svarte *i stor grad* eller *svært stor*

grad på spørsmålene om hvor fornøyd de var med at erfaringer fra praksisfeltet ble brukt i undervisningen i pedagogikk og yrkesdidaktikk. Dette tyder på behov for å styrke sammenhengen mellom læringsarenaene.

En norsk kvalitativ intervjustudie fra PPU-Y viste at det er behov for å styrke samarbeidet mellom universitet og praksislærere (Herudsløkken et al., 2019; Schaug & Herudsløkken, 2019). Studien synliggjorde at praksislærerne mente informasjonen fra universitetet om praksisperioden var uklar, at de var usikre på innholdet i programplanen for lærerutdanningen, at de opplevde at oppgavene yrkesfaglærerstudentene skulle gjennomføre var for teoretiske og at det var for lite kontakt med universitetet. Videre viste resultatene fra denne studien at det skapte utfordringer for den opplevde sammenheng at praksislærere og yrkesfaglærerstudenter hadde ulike syn på sammenhengen mellom teori og praksis og at praksislærerne hadde for liten tid til for- og etterveiledning med fokus på refleksjon. At praksislæreres rolle er uklar kan også føre til varierte opplevelser av støtte og veiledning under pedagogisk praksis (Schaug & Herudsløkken, 2019; Ulvik, Helleve, et al., 2018).

En studie fra den svenske yrkesfaglærerutdanningen viste at tilrettelegging for refleksjoner over erfaringer fra praksisperioden bidro til å skape bedre sammenheng mellom læringsarenaene (Berglund et al., 2020). Refleksjoner i form av rapporter fra praksisperioden kunne bidra til å bygge bro mellom innholdet i undervisningen på campus og erfaringene de gjorde i pedagogisk praksis.

I den norske yrkesopplæringen med brede utdanningsprogram hvor det første året rommer mange yrker, legger yrkesfaglærerutdanningene vekt på interesse-differensiert opplæring (Dahlback et al., 2018; Schaug & Herudsløkken, 2019). Imidlertid viste studiene til Dahlback et al. (2018) og Schaug og Herudsløkken (2019) at yrkesfaglærerstudentene i varierende grad fikk mulighet til å prøve ut interessedifferensiert undervisning i praksisperiodene slik det var vektlagt i undervisningen på campus. Dette bidro til opplevelse av manglende sammenheng mellom undervisningen på universitetet og praksis i videregående skole.

Det er ikke gjennomført mange studier som har satt søkelys på sammenhengen mellom de to læringsarenaene i yrkesfaglærerutdanningen, men oppsummert viser forskningen at yrkesfaglærerstudenter opplever de samme utfordringene som allmennlærerstudenter med manglende sammenheng mellom den teoretiske kunnskapen de møter på universitet og høyskole og den erfaringsbaserte kunnskapen de møter i pedagogisk praksis. Studenter kan også oppleve at de ikke får de konkrete verktøyene de trenger som lærere. Videre, har forskning synliggjort et behov for bedre samarbeid mellom universitetsansatte og praksislærere. Det er derfor behov for studier som kan bidra med konkrete erfaringer med forsøk, for eksempel i form av innovasjonsprosjekter, som prøver ut ulike tiltak som kan skape bedre sammenheng mellom opplæringen på campus og pedagogisk praksis.

Teoretisk rammeverk

Yrkesfaglærerutdanningen foregår på to arenaer, på universitet/høgskole og i pedagogisk praksis på yrkesfaglige utdanningsprogram. Disse institusjonene har ulike primæroppgaver og logikker, og kan beskrives som ulike praksisfellesskap (Wenger, 1998). Et praksisfellesskap defineres som en gruppe mennesker som deler et felles engasjement for noe de arbeider med (s. 73). Ut fra denne forståelsen, definerer vi en avdeling eller et lærerteam på et yrkesfaglig utdanningsprogram som et praksisfellesskap. Deres primæroppgave er å legge til rette for ungdoms kompetanseutvikling i tråd med gjeldende læreplanverk og arbeidslivets kvalifikasjonsbehov.

Praksisfellesskapene av lærerutdannere på universiteter og høgskoler formidler primært teoretisk kunnskap som studentene skal nyttiggjøre seg gjennom arbeid med oppgaver og eksamen i tråd med akademiske normer. Selv om yrkeslærerutdannerens oppgave er å forberede for arbeidsoppgavene som yrkesfaglærere, vil yrkesfaglærerstudentene derfor møte en annen logikk og andre forventninger på campus enn de gjør i pedagogisk praksis. Når de deltar i undervisningsaktiviteter på campus vil de utgjøre et praksisfellesskap med sine medstudenter. Deres praksisfellesskap er engasjert i studentaktiviteter som arbeid med pensumlitteratur og oppgaveskriving.

Konseptet *boundary crossing* (Akkerman & Bakker, 2011), grensekryssing på norsk, synliggjør at yrkesfaglærerstudenter deltar i to ulike læringskontekster og krysser grenser mellom dem. En grense (*boundary*) representerer kulturelle forskjeller mellom to ulike kontekster og dermed de potensielle utfordringene med samhandling mellom dem, men også muligheter for å skape sammenheng og samhandling (s. 139). Deltakelse på ulike læringsarenaer med sine logikker innebærer på den ene siden at begge arenaene anerkjennes som nødvendige og at yrkesfaglærerstudentene får mulighet til å utvikle profesjonskunnskap som ikke er tilgjengelig innenfor kun en av arenaene. På den andre siden innebærer det at det må etableres sammenheng på tvers av ulike kontekster og kunnskapskulturer.

Konseptet grensekryssing impliserer å anerkjenne at det finnes spenninger og diskontinuitet mellom ulike sosiokulturelle praksiser (Akkerman & Bakker, 2011). Målsetningen er derfor ikke å unngå ulikheter eller å forsøke å skape mest mulig likhet mellom læringsarenaene. Grensekryssing mellom ulike kontekster som er forskjellige og motsetningsfylte, ses derimot som en læringsressurs (s. 136). Grensekryssing kan dermed bidra til at yrkesfaglærerstudentene kan skape mening som går ut over den lokale praksisen ved den enkelte læringsarena. Nettopp ulikhetene og det kompliserte forholdet mellom de to læringsarenaene kan føre til nye og til tider uforutsette muligheter for læring (Duch & Andreasen, 2017).

Gjennom å legge til rette for at yrkesfaglærerstudentene blir aktører i å håndtere spenninger mellom læringsarenaene, kan det skapes muligheter for at manglende sammenhenger blir begripelige og håndterbare og at de samtidig opplever nye sammenhenger (Hatlevik & Havnes, 2017). Studenters grensekryssing skaper muligheter for at de kan se sammenhenger mellom pedagogisk teori og erfaringer de har gjort i pedagogisk praksis (Hatlevik & Smeby, 2015). Dette kan bidra til at de reflekterer over og stiller spørsmål ved egen og andres praksis. Ved at studenter arbeider med å forstå teori knyttet til konkrete erfaringer i praksis, kan erfaringene bli generalisert og danne grunnlag for profesjonsutøvelse i nye situasjoner (Fiskerstrand, 2021).

Refleksjoner og diskusjoner om erfaringer fra praksis kan også bidra til at yrkesfaglærerstudentene erkjenner at praksisen i skolen bunner i teoretisk kunnskap, selv om den kan framstå som *taus* (Polanyi, 1983). Yrkesfaglærerstudenters grensekryssing kan dermed bidra til at de blir klar over samspill og spenninger mellom teoretisk og erfaringsbasert kunnskap. Ved at de for eksempel tar med seg konkrete erfaringer fra pedagogisk praksis som innspill i diskusjoner på campus, kan de fungere som *brokers* som kan bidra til at universitetskonteksten påvirkes av konteksten pedagogisk praksis, og vice versa (Akkerman & Bakker, 2011, s. 140).

Begrepet *boundary objects* (Akkerman & Bakker, 2011; Star & Griesemer, 1989), grenseobjekter på norsk, beskriver artefakter som har som funksjon å bygge bro mellom ulike praksiser. Et grenseobjekt skal fungere i hver av de ulike kontekstene, og skal derfor være plastisk nok til å fungere i den lokale konteksten og samtidig robust nok til å kunne være et bindeledd mellom kontekstene (Star & Griesemer, 1989). I denne artikkelen undersøker vi på hvilken måte yrkesfaglærerstudentenes utviklingsprosjekter kan fungere som et grenseobjekt. At utviklingsprosjektene skal gjennomføres i siste pedagogiske praksisperiode, betyr at yrkesfaglærerstudentene på den ene siden må planlegge, gjennomføre og evaluere et utviklingsprosjekt som er relevant på et yrkesfaglig utdanningsprogram. På den annen side skal utviklingsprosjektet danne grunnlag for en eksamensinnlevering som fyller gitte akademiske krav. Dette betyr at eksamensoppgaven har potensial til å fungere som et grenseobjekt ved at den inneholder ulike betydninger og perspektiver i ulike kontekster, og også kan fungere sammenbindende (Star & Griesemer, 1989). Vi kommer tilbake til en nærmere beskrivelse av utviklingsprosjektet i neste kapittel om forskningstilnærming.

Forskningstilnærming

Forskningstilnærmingen i prosjektet er inspirert av pedagogisk aksjonsforskning hvor det er profesjonsutøverens opplevelse av utfordringene som er utgangspunkt for forskningsinteressen og kunnskapsproduksjonen (Cochran-Smith &

Lytle, 1993; Stenhouse, 1975). Som lærerutdannere bruker vi våre erfaringer med manglende sammenheng mellom opplæringsarenaene i yrkesfaglærerutdanningen til å prøve ut tiltak som kan bidra til bedre sammenheng samtidig som vi *systematisk og kritisk dokumenterer og analyserer prosessen* (Hiim, 2010). Vi ønsker at erfaringene på den ene siden brukes til å forbedre kvaliteten på yrkesfaglærerutdanningen på universitetet, samtidig som vi bidrar til kunnskapsutvikling på feltet.

Det pedagogiske utviklingsprosjektet

Som vi redegjorde for innledningsvis, skal yrkesfaglærerstudentene gjennomføre et pedagogisk utviklingsprosjekt i sin fem uker lange 3. praksisperiode i høstsemesteret 2. studieår. Utviklingsprosjektet er en del av eksamen og teller 1/3 av den avsluttende karakteren. Oppgaven skiller seg fra andre oppgaver ved at det settes søkelys på utvikling av endringskompetanse gjennom å observere, analysere og utvikle opplæringspraksisene. Yrkesfaglærerstudentene velger selv tema, problemstilling og gruppeinndeling for utviklingsprosjektet. Gruppetørrelsen skal være på 2-4 deltakere. At utviklingsprosjektene skal gjennomføres i praksisperioden kan bidra til at studentene arbeider på tvers av campus og praksisskole, og det er ønskelig at praksislærer og studenter kan diskutere prosjektene.

I vurderingskriteriene for utviklingsprosjektene vektlegges det at utviklingsarbeidet skal gjennomføres med en vitenskapelig tenke- og arbeidsmåte og kombinere yrkesdidaktikk, pedagogikk og pedagogisk praksis. Utviklingsprosjektet skal dokumenteres gjennom en skriftlig grupperapport med et omfang på 3500 ord +/- 10%. Det skal samles inn egen empiri og rapporten skal beskrive et utviklingsarbeid med tiltak for endring og forbedring.

Deltakere, forskerroller og datainnsamling i prosjekter

Det var 24 yrkesfaglærerstudenter i klassen hvor studien ble gjennomført. Arbeidet med utviklingsprosjektene ble gjennomført i åtte grupper med to til fire deltakere i hver gruppe. Vi var to forskere som deltok i prosjektet. Øyvind Granborg var emneansvarlig for klassen og hadde ansvaret for undervisning og veiledning gjennom det toårige utdanningsløpet. Nina Aakernes var ikke direkte involvert i undervisningen av klassen, men deltok som observatør i tre undervisningsøkter som var direkte knyttet til gjennomføringen av utviklingsprosjektene. Aakernes har tidligere erfaring fra undervisning og veiledning på PPU-Y.

Begge forskerne skrev forskerlogger underveis, og disse ble brukt i utformingen av den tematiske intervjuguiden. Selv om intervjuguiden var utformet med utgangspunkt i den lokale konteksten og rammene for gjennomføringen av utviklingsprosjektet, var den også inspirert av det teoretiske ramme-

verket for studien og tidligere forskning på feltet. Intervjuguiden inneholdt temaer som: Bakgrunn for valg av tema; planlegging, gjennomføring og rammer for prosjektet; samarbeid i gruppa og med kollegaer og praksisveileder; arbeid med teori; egen profesjonsutvikling.

For å få tilgang til yrkesfaglærerstudentenes erfaringer med utviklingsprosjektet, ble det gjennomført semistrukturerte individuelle intervjuer med seks yrkesfaglærerstudenter i løpet av sommer/tidlig høst 2023. Først ble fem deltakere fra fem ulike grupper som vi mente ville representere ulike prosjekter og erfaringer spurt om å delta i intervjustudien. Gruppemedlemmet som hadde stått for kommunikasjonen med Øyvind Granborg om veiledning underveis i prosjektperioden ble forespurt om å delta. Etter den innledende analysen av de fem første intervjuene valgte vi kontakte en yrkesfaglærerstudent fra en sjettede gruppe med forespørsel om å delta. Dette valget redegjør vi nærmere for under beskrivelsen av analyseprosessen.

For at intervjudeltakerne skulle få mulighet til å reflektere og sette ord på erfaringene i ettertid, valgte vi å gjennomføre intervjuene etter at eksamen var gjennomført og sensurert. Vi valgte å la Nina Aakernes gjennomføre samtlige intervjuer, fordi vi mente at dette kunne bidra til at deltakerne lettere kunne komme med kritiske betraktninger om hvordan arbeidet med utviklingsprosjektene var organisert fra universitets side. Intervjuene ble gjennomført via Zoom og varte ca. 60 minutter og det ble gjort lydopptak for senere analyse. Intervjuene ble transkribert ordrett, anonymisert og klargjort for analyse. I resultatkapittelet har vi gjort enkelte omskrivninger i sitatene for å ivareta lesbarheten, men har bestrebet oss på å ivareta utsagnenes muntlige form.

Analyseprosessen

Analysearbeidet startet med individuelle gjennomlesninger av de fem første intervjuene for å få en oversikt over det innsamlede datamaterialet. Deretter møttes vi og diskuterte hovedinntrykkene fra intervjuene og bestemte å samarbeide om analysen og starte med en *induktiv* (Braun & Clarke, 2006) tilnærming til analysen. Dette innebar at de første kodene vi utformet var empirinære og lå nært opptil intervjudeltakernes utsagn. Etter hvert som antall koder ble omfattende bestemte vi at det var hensiktsmessig også å utforme koder med utgangspunkt i det teoretiske rammeverket og tidligere forskning – en *deduktiv* (Braun & Clarke, 2006) tilnærming. Analyseprosessen kan derfor karakteriseres som *abduktiv* (Patton, 2015).

Gjennom analysen av de fem intervjuene oppdaget vi på den ene siden mønstre i datamaterialet. På den andre siden viste analysen variasjoner i deltakernes erfaringer, og det måtte utvikles nye koder for hvert intervju. For å styrke den *interne validiteten* (Cohen et al., 2011), bestemte vi i første omgang å gjennomføre et sjettede intervju. Analysen av dette intervjuet brakte lite nytt i

belysning av forskningsspørsmålet og det var ikke behov for å utvikle nye koder. Vi mente derfor at studien hadde tilstrekkelig intern validitet til å belyse fenomenet vi undersøker og at vi ville komme fram til troverdige resultater med seks intervjuer.

Neste steg i analysearbeidet var å sortere kodene etter de mønstrene vi hadde oppdaget underveis. Med utgangspunkt i forskningsspørsmålet og det teoretiske rammeverket, sorterte vi deretter materialet i to hovedkategorier.

Forskningskvalitet og etiske betraktninger

Gjennom grundig analyse av datamaterialet mener vi at studien har god intern validitet, ved at datamaterialet er egnet til å beskrive fenomenet vi undersøker (Cohen et al., 2011). Vi har lagt vekt på å gjengi sitater som vi mener representerer deltakernes synspunkter, viser mangfoldet av erfaringer og som ikke er tatt ut av sin sammenheng. Den *eksterne validiteten* (s. 255) og dermed relevansen av studien er ivaretatt gjennom forankring i et relevant teoretisk rammeverk og tidligere forskning på feltet. Som forskere i egen praksis, vil våre erfaringer og verdier prege hvordan vi forstår og fortolker datamaterialet. For å ivareta studiens troverdighet har vi derfor lagt vekt på transparens og ettersynbarhet gjennom å synliggjøre og begrunne metodiske valg og forskningsprosessen, samt å presentere resultatene slik at det er tydelig at fortolkningen er forankret i empirien.

Vi har fulgt norske SIKT - Kunnskapssektorens tjenesteleverandør, sine retningslinjer for personvern og datalagring i prosjektet, og prosjektet er godkjent. Samtlige yrkesfaglærerstudenter er informert om forskningsprosjektet og deltakerne i intervjuene har aktivt samtykket til deltakelse. I framstilling av resultatene har vi lagt vekt på å sikre deltakernes anonymitet.

Resultater

Resultatkapittelet er strukturert etter følgende to hovedkategorier: 1) Utviklingsprosjektet som grenseobjekt, 2) Veiledning og samarbeid på tvers av arenaene.

Utviklingsprosjektet som grenseobjekt

Denne kategorien er inndelt i to underkategorier; *sammenheng mellom ulike kunnskapskulturer* og *endrings- og utviklingsarbeid som profesjonskompetanse*.

Sammenheng mellom ulike kunnskapskulturer

En forutsetning for at utviklingsprosjektet kan fungere som et *grenseobjekt* (Akkerman & Bakker, 2011; Star & Griesemer, 1989) er at arbeidet med prosjektet har bidratt til å knytte sammen læringen på campus og i pedagogisk praksis. I intervjuene beskrev yrkesfaglærerstudentene hvordan anvendelsen av pensum-

litteraturen under arbeidet med den skriftlige rapporten har bidratt til økt forståelse for de praktiske erfaringene de gjorde. En av deltakerne beskrev erfaringene fra praksisperioden som "å få knagger å henge teorien på". Dette indikerer at arbeidet med praksisrapporten fungerte som en forlengelse av praksisperioden ved at yrkesfaglærerstudentene gikk tilbake til erfaringene de hadde gjort og reflekterte over dem i lys av pedagogisk teori. De erfarte også at ved å vende tilbake til logger som var skrevet i praksisperioden kunne nedtegnelser av konkrete hendelser brukes som utgangspunkt for teoriforankring. En av studentene beskrev nytten av å forankre utviklingsprosjektet i pedagogisk teori på denne måten:

Vi var veldig gira og fikk det veldig godt til med tanke på å forankre det i teori og forståelse for hva som trengs for å gjøre den undervisningen bedre på de områdene som vi oppfattet som veldig teoretisk tunge og ikke så veldig yrkesrelevante.

Underveis i prosjektperioden reflekterte vi over om utformingen av oppgaven med krav til vitenskapelig arbeidsmåte og teoriforankring kunne føre til at fokus på det praktisk utviklingsorienterte arbeidet kom i bakgrunnen. Resultatene fra intervjuene tyder imidlertid på at yrkesfaglærerstudentene har anvendt teorien til å få en dypere forståelse for de praktiske erfaringene de gjorde. En av deltakerne uttalte:

Utviklingsprosjektet bidro til nysgjerrighet på teoretisk kunnskap om feltet. [...] I starten var man for dårlig til å finne fram ting, da var det veldig generelt. Men etter hvert, dess bedre man ble til å finjustere søkene sine, [...] så fant man sinnssykt mye pensum og teori. Det var artig å se hele prosessen med å vite hva folk har gjort før, og at folk har tenkt samme tanken. Men også hvor viktig det er i fagene.

Denne deltakeren knyttet interessen til å finne fram i den pedagogiske teorien direkte til erfaringene de gjorde i utviklingsprosjektet. Resultatene indikerer derfor at utviklingsprosjektet kan fungere som et grenseobjekt ved at yrkesfaglærerstudentene arbeidet med å knytte sammen erfaringsbasert og teoretisk kunnskap og dermed erfarte at kunnskapsformene utfylte hverandre.

Endrings- og utviklingsarbeid som profesjonskompetanse

En vesentlig side ved yrkesfaglærerens kompetanse er å kunne jobbe prosessorientert med utvikling av egen praksis (Hiim, 2016). Endrings- og utviklingskompetanse og anvendelse av relevant forskning er derfor en viktig del av profesjonskompetansen som skal utvikles gjennom studiet. Resultatene tyder på at arbeidet med utviklingsprosjektet har ført til at refleksjon over viktigheten av å jobbe utviklingsorientert i skolen. En av deltakerne beskrev erfaringene slik:

For jeg har ikke tenkt før på at utviklingsarbeid er en del av skolevirkeligheten. At det faktisk er en lærers oppgave å bidra til endring, også for eksempel gjennom forskning. Det har jeg egentlig ikke tenkt på før. Men det er klart, det er en grunn til

at praksis har endret seg gjennom tiden. Og det er jo fordi det har vokst fram behov for å endre nå-situasjon, for å si det sånn.

Den økte forståelsen for betydningen av endrings- og utviklingskompetanse ble knyttet til erfaringer yrkesfaglærerstudentene gjorde under arbeidet med utviklingsprosjektet. En av dem henviste til erfaringene på denne måten: "Det er en kjempeviktig del av det å utvikle seg selv som lærer og skolen som en organisasjon, at man holder på med utviklingsarbeid. Det har jeg absolutt forstått og fått erfare." Yrkesfaglærerstudentene understreket at nettopp fokuset på en aksjonsrettet tilnærming hvor læreres profesjonsutvikling knyttes til at de forsker i egen praksis har gjort erfaringene fra utviklingsprosjektet viktige, slik følgende sitat belyser:

Tidligere har jeg vel ikke tenkt så konkret på det selv. Jeg har jo ikke gjort den type prosjekter før, hvor du lærer deg litt om forskningsmetoder, på lavt nivå, vil jeg si, og behovet for å forske på noe for å skape en endring. De forskjellige modellene der, var nyttig og interessant, synes jeg. For å få litt forståelse av hva et forsknings- og endringsarbeid kan bestå av.

Etter den muntlige gruppepresentasjonen ved prosjektets avslutning, stilte vi spørsmål ved om yrkesfaglærerstudentene tolket oppgaveteksten slik at det viktigste ved utviklingsprosjektet var å måle i etterkant om utprøvingen de gjorde i skolen hadde en målbar effekt. Imidlertid tyder intervjuene på at de har reflektert over erfaringene med å jobbe utviklingsorientert i lys av teoretiske perspektiver og at utviklingsprosjektet derfor har bidratt til å skape sammenheng mellom læringsarenaene.

Veiledning og samarbeid på tvers av arenaene

Denne kategorien er inndelt i to underkategorier; *samarbeid på praksisskolen* og *veiledning og samarbeid på campus*.

Samarbeid på praksisskolen

Som vi beskrev innledningsvis, er det en uttrykt en forventning i retningslinjene for studiet at yrkesfaglærerstudentenes arbeid med utviklingsprosjektet skal foregå i samarbeid med praksislærer og andre kollegaer på praksisskolen (Universitets- og høgskolerådet, 2018). Resultatene tyder imidlertid på at et slikt samarbeid i liten grad ble oppnådd. I intervjuene var det kun en av deltakerne som løftet fram et slikt samarbeid: "Jeg synes også det var veldig flott den støtten jeg fikk fra de andre lærerne som var med på det. Det var liksom som at alle ville være med på det."

Resultatene indikerer imidlertid at flere av yrkesfaglærerstudentene fikk til et samarbeid med sin praksisveileder om gjennomføringen av utviklingsprosjektet. En av dem beskrev samarbeidet slik: "Praksisveilederen min var med på kjøkkenet. Hun hjalp meg med å få elevene til å reflektere mens de jobba og stilte

kontrollspørsmål. Så hun bidro jo inn.” Da yrkesfaglærerstudentene skulle ha en muntlig gruppepresentasjon av prosjektene for medstudenter i april, hadde vi invitert praksisveilederne til å delta digitalt. Selv om det var flere som uttrykte interesse, var det kun to praksisveiledere som deltok. De øvrige meddelte at de hadde kollisjoner med andre arbeidsoppgaver. Dette kan tyde på at det er rammefaktorer som tilgjengelig tid som står i veien for et styrket samarbeid mellom læringsarenaene og ikke praksisveiledernes holdninger.

Undervisning og veiledning på campus

I vårsemesteret første studieår ble det gjennomført en forelesning om hvorfor det er viktig å jobbe endrings- og utviklingsorientert i skolen. Forelesningen ble gjennomført av en ansatt på en av praksisskolene som satte søkelys på konkrete erfaringer fra egen skole. Han knyttet også behovet for skoleutvikling sammen med samfunnsutvikling og utdanningsreformer. I intervjuene kom det fram at yrkesfaglærerstudentene i varierende grad knyttet denne forelesningen til arbeidet med egne utviklingsprosjekter. En av dem uttalte:

Ja, så i utgangspunktet ble vi jo litt introdusert første året om at vi skulle ha et utviklingsprosjekt. Men det hadde bare gått [lager plystrelyd] på en måte. Du får så mye informasjon i løpet av året, både innenfor studiet, men også andre steder, at ikke alt fester seg like bra.

Dette tyder på at denne forelesningen kom på et tidspunkt hvor yrkesfaglærerstudentene hadde mer enn nok med andre arbeidskrav og at de derfor ikke knyttet temaet til noe som skulle skje neste studieår. Det var først da de gjorde egne praktiske erfaringer med å jobbe endrings- og utviklingsorientert, at teoretiske perspektiver om *læreren som forsker* (Hiim, 2016) ble meningsfulle.

Yrkesfaglærerstudentene la vekt på at arbeidet med utviklingsprosjektet på campus var vesentlig for å forstå praktiske erfaringer i lys av relevant teori. Enkelte fremhevet at diskusjoner med veileder var viktig i denne prosessen. Andre trakk fram at de hadde læringsutbytte av andre gruppers presentasjon av sine erfaringer og hvordan ulike teoretiske perspektiver kunne bidra til å belyse erfaringene. Også denne delen av det empiriske materialet tyder på at utviklingsprosjektet skapte sammenheng mellom læringsarenaene.

Oppsummering

Oppsummert viser resultatene at yrkesfaglærerstudentenes arbeid med utviklingsprosjekter kan bidra til å skape bedre sammenheng mellom de to læringsarenaene campus og pedagogisk praksis. Dette skjer ved at relevant teori knyttes sammen med praktiske erfaringene som gjøres under gjennomføringen av prosjektet i pedagogisk praksis. Arbeidet med praksisrapporten fører til at yrkesfaglærerstudentene reflekterer over egne erfaringer i lys av pensumlitteraturen

som presenteres på campus. Utviklingsprosjektet kan derfor fungere som et *grenseobjekt* slik det er beskrevet av blant annet Akkerman og Bakker (2012).

Drøfting

I denne artikkelen har vi presentert resultater som kan belyse forskningsspørsmålet: *Hvordan kan yrkefaglærerstudenters arbeid med utviklingsprosjekter skape sammenheng mellom læring på universitet og læring i pedagogisk praksis?* Vi har også undersøkt på hvilken måte utviklingsprosjektet kan fungere som et *grenseobjekt* (Akkerman & Bakker, 2011; Star & Griesemer, 1989). I drøftingen vil vi legge hovedvekt på hvilke rammefaktorer som påvirker yrkesfaglærerstudentenes mulighet til læring i *grensekryssingen* (Akkerman & Bakker, 2011) mellom læringsarenaene. Vi vil også drøfte mulige implikasjoner av studien knyttet til videreutvikling av samarbeid mellom universitet/høgskole og praksisskoler.

Resultatene tyder på at yrkesfaglærerstudentenes arbeid med utviklingsprosjektene har bidratt til å skape bedre *intern sammenheng* (Heggen et al., 2015) i studiet ved at de opplevde sammenheng mellom læringsarenaene pedagogisk praksis og campus. Det empiriske materialet synliggjør hvordan yrkesfaglærerstudentenes arbeid med utviklingsprosjektet førte til at de knyttet sammen den erfaringsbaserte kunnskapen de møtte i pedagogisk praksis og den teoretiske de møtte på campus. Mulighet til å knytte sammen disse kunnskapsformene har vist seg å være en vesentlig side ved lærerstudenters opplevde sammenheng i studiet (Raaen & Thorsen, 2020; Smeby & Mausestagen, 2017). Resultatene fra denne studien kan også forsås i lys av resultatene fra studien til Ulvik, Riese, et al. (2018) hvor lærerstudentenes aksjonsrettete, utviklingsorienterte arbeid bidro til å skape sammenheng mellom forskningsbasert og erfaringsbasert kunnskap. Også vår studie tyder på at utviklingsorienterte oppgaver kan bidra til å skape denne sammenheng gjennom at yrkesfaglærerstudentene beveger seg mellom to ulike sosiokulturelle praksiser med ulike logikker og lærer i grenseflatene, slik det beskrives av Akkerman og Bakker (2012).

Studien bidrar også til å belyse hvordan utviklingsprosjektet kan fungere som et *grenseobjekt*. I oppgaveteksten er det lagt vekt på at den skriftlige rapporten skal ta utgangspunkt i de konkrete erfaringene yrkesfaglærerstudentene har gjort med den praktiske gjennomføringen av prosjektet i skolene og knytte disse sammen med relevant teori og forskning. Resultatene tyder på at denne vektleggingen har vært viktig for at oppgaven har fungert i begge kontekstene og på den måten bidratt til å knytte dem sammen (Star & Griesemer, 1989). Resultatene synliggjør hvordan yrkesfaglærerstudentene har opplevd at kombinasjonen av, og sammenheng mellom kunnskapsformer har vært vesentlig for læringsutbyttet. Yrkesfaglærerstudentenes refleksjoner over praktiske erfaringer

i lys av relevant teori kan bidra til at det bygges bro mellom opplæringsarenaene (Berglund et al., 2020).

Tidligere forskning har belyst at tettere samarbeid mellom praksislærere i pedagogisk praksis og universitetslærere er vesentlig for å styrke sammenheng mellom opplæringsarenaene (f.eks. Canrinus et al., 2015; Schaug & Herudsløkken, 2019). Det er vanskelig å finne resultater fra vår studie som underbygger at et slikt samarbeid ble styrket i perioden. Det hører med til historien at under gjennomføringen studien ble det innført sparetiltak ved universitetet som innebar at universitetslærerne mistet muligheten til fysiske besøk på praksisskolene. Sparetiltaket innebar at praksislærere og universitetslærere hadde begrensede arenaer for diskusjon av blant annet yrkesfaglærerstudentenes arbeid med utviklingsprosjektene. Likevel, synliggjør resultatene at enkelte praksislærere var engasjert i yrkesfaglærerstudentenes utviklingsprosjekter. Imidlertid finner vi få resultater som tyder på at større deler av lærerkollegiet var involvert i utviklingsprosjektene, slik det er beskrevet i de nasjonale retningslinjene for studiet (Universitets- og høyskolerådet, 2018).

Resultatene indikerer at arbeidet med utviklingsprosjektene har bidratt til at yrkesfaglærerstudentene har opplevd *intern sammenheng* (Heggen et al., 2015) i studiet. De har diskutert erfaringene fra gjennomføring av prosjektene i *praksisfellesskapet* (Wenger, 1998) på campus. Erfaringsdeling, diskusjon og refleksjon har ført til at yrkesfaglærerstudentene har utviklet forståelse for hvordan pedagogisk teori og praktiske erfaringer kan knyttes sammen. Dermed kan det bygges bro mellom læringsarenaene, noe som er vesentlig for utvikling av helhetlig profesjonskunnskap som yrkesfaglærer. Resultatene tyder også på at arbeidet med utviklingsprosjektene har styrket yrkesfaglærerstudentenes forståelse av at endrings- og utviklingskompetanse er et vesentlig aspekt ved læreres profesjonskunnskap, og at lærere kan jobbe prosessorientert med utvikling av egen praksis gjennom å forske i den (Hiim, 2016).

Studien synliggjør behov for tettere samarbeid mellom universitet og praksisskoler om yrkesfaglærerstudentenes utviklingsprosjekter. At arbeidet med utviklingsprosjektet blir et tema for universitetslæreres oppfølging av pedagogisk praksis, kan bidra til at utviklingsprosjektet tar utgangspunkt i reelle behov i skolen. Da kan utviklingsprosjektet i større grad bli utformet i samarbeid mellom yrkesfaglærerstudent, praksislærer og kollegaer på den enkelte avdeling.

Konklusjon

Resultatene fra studien viser at utviklingsprosjektet kan fungere som et grenseobjekt som skaper sammenheng mellom læringsarenaene og ulike kunnskapsformer ved at yrkesfaglærerstudentene anvender teoretiske begreper for å skape forståelse for sine praktiske erfaringer. Studien har imidlertid også identifisert

at yrkesfaglærerstudenters arbeid med utviklingsprosjekter har et større potensial enn det som er utnyttet ved vårt universitet. Gjennom et tettere samarbeid mellom universitetslærere og praksislærere kan betydningen av utviklingsprosjektet som grenseobjekt styrkes.

På bakgrunn av erfaringene fra studien mener vi det er behov for nye innovasjonsprosjekter hvor det legges til rette for at praksislærere og universitetslærere kan samarbeide om hvordan utviklingsprosjekter i pedagogisk praksis kan gjennomføres. Samarbeidet kan skape innsikt i utviklingsbehov i praksisskolene og skape muligheter for at yrkesfaglærerstudentene involveres i og får ta del i det kontinuerlige utviklingsarbeidet som foregår i skolene. På den måten kan yrkesfaglærerstudentenes utviklingsprosjekter knyttes nærmere til arbeidet på avdelingene, sikre involvering fra kollegaer, og ikke framstå som et slags kortvarig "stunt" som er løsrevet fra det øvrige utviklingsarbeidet på praksisskolen. Erfaringene fra ulike innovasjonsprosjekter kan bidra til styrking av yrkesfaglærerutdanningen ved at det blir tettere sammenheng mellom undervisningen på campus og utviklingen som skjer i praksisfeltet.

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Expansive conceptualisation of the impact of continuous learning programmes: An analysis of research-based workshops in higher vocational education and training

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Abstract

Finnish higher education institutions offer continuous learning opportunities, including professional specialisation education programmes for the health and social sector. This article focuses on the conceptualisation of the impact of these programmes, which was the topic of discussion by education and working-life actors in research-based workshops. Drawing on the cultural-historical activity theory (CHAT) approach, the study seeks to answer the following research questions: What are the main themes through which the participants conceptualise the impact of education? How do the themes expand the conceptualisation of the impact of education? A qualitative study analysed data from the multi-professional discussions facilitated by researcher-developers in online workshops during the COVID-19 pandemic. The findings describe the impact-related discussion themes and analyse their expansive potential. Participants' discursive actions in research-based online workshops manifest expansive conceptualisation on multiple dimensions, but also reveal dilemmatic impact-related questions that reflect the underlying contradictions of continuous learning programmes in the health and social sector.

Keywords: dimensions of expansion, health and social care, impact of higher vocational education and training (HVET), professional specialisation education (PSE) programmes



Introduction

In higher education (HE) and vocational education and training (VET), the inter-linked learning contexts of education and work are currently being strengthened both in educational practice and in theory formation. Examining 'how education systems and institutions have met the challenge of including work experience in their study programmes' (Tynjälä, et al., 2022) implicates that the knowledge creation for educational and pedagogic practice should involve the parties of education and working life together. Research and development projects in HE and VET organisations are implemented by creating shared discussion forums for teachers, students, and working life mentors, who are affected by and who hopefully benefit from the knowledge creation of the projects (e.g., Vetoshkina et al., 2023). This article presents one such project by Finnish universities of applied sciences (UASs), which aimed to gain a better understanding of the impact of professional specialisation education (PSE) programmes targeted at continuous learning in working life.

Continuous learning in the health and social care sector is currently seen as an important aspect to increase the resilience of employees in the face of the upcoming challenges in care – technological development, the integration of separate service systems, and seeking solution to staff shortage, to name a few (e.g., Ahonen et al., 2023; Juvonen et al., 2022; Konttila et al., 2019). As the societal and political demand for continuous learning increases, the question of the impact of education programmes arises, making the need for research knowledge on the impact in Finnish higher vocational education and training (HVET) institutions acute (Aittola & Ursin, 2019). Assessing the impact of education is not a straightforward process; the criteria depend on the perspective adopted (Batterbury & Hill, 2005). This article explores the collective conceptualisation of the impact of PSE programmes in the health and social care (hereafter, 'impact of education') bringing together the perspectives of teachers, students, working-life actors, and researchers in a series of research-based workshops. The context of the study is the online workshops conducted during the COVID-19 restrictions. Previous research (Brown et al., 2022; Juvonen & Toiviainen, 2024; Sarantou et al., 2021) has shown that remote interaction between professionals can be productive in terms of participants' knowledge creation and learning. The researchers point out that this requires a good pedagogical quality of online working environments. In order to gain a deeper understanding of the productive potential of online workshops, we will focus on the moments of 'generative collaborative actions' (Damşa, 2014) identified in a previous study (Juvonen & Toiviainen, 2024).

Applying the CHAT approach (Engeström & Sannino, 2017; Gedera & Williams, 2015), we define the generative collaborative actions as the actions of expansive conceptualisation of the object of discussion (the impact of education).

Our approach is based on two propositions: first, in order to be relevant to educational practice, research-based knowledge should be thematised and contextualised by practitioners themselves in dialogue with researchers (Engeström et al., 2006; Juvonen & Toiviainen, 2024). Second, the collaboration between research and practice will serve the learning and development efforts of educational practitioners as far as it expands (widens) their insights into the topic under discussion, rather than reproduces what is generally known through educational research and policy (Engeström & Sannino, 2017).

The following sections present perspectives on the impact of education to provide context for the workshop discussions. This is followed by a section on the activity theoretical framework, in particular the meanings of *conceptualisation* (Engeström et al., 2006) and the *dimensions of expansion* (Toiviainen et al., 2022). Furthermore, the research questions, the project's development work and the role of research and researchers are presented, followed by the data and the method of analysis. The results describe the themes and their expansive potential as the outcome of the interpretative analysis of the workshop discussions. Finally, a discussion of the results and the conclusion close the article.

Perspectives on the impact of education

Research has shown that the evaluation of the effectiveness of training programmes emphasises measurable learning outcomes, the transfer effect from training to work, and observable changes in work performance (Aittola & Ursin, 2019; Alemdag et al., 2020; Blume et al., 2010; Lee, 2011; Tremblay et al., 2017). Furthermore, research has targeted pedagogical solutions that integrate learning and working and emphasise feedback from students, research, training, and working life (Clark et al., 2015; Kallunki & Seppälä, 2016; Maassen et al., 2012; Rauhala & Urponen, 2019).

The impact of education is part of the broader field of quality assessment research (Räisänen & Rökköläinen, 2014; Sannikova et al., 2022). A study of Swedish higher vocational training (HVE) revealed a lack of definitions and criteria for quality and possibly occurring quality differences between educational providers (Littke & Thang, 2015). Furthermore, quality was related to the differences found in the commitment of education providers and working-life partners to HVE. Another analysis of Swedish vocational education and training (VET) (Tsagalidis & Terning, 2018) critically discusses the tendency to assess the value of students in terms of their ability to produce profit and return for entrepreneurs and shareholders. Tanggaard (2020) points out that assessment is not a neutral tool but has an impact on the learning processes being assessed. The impact of continuous learning opportunities can be scrutinised from the

perspective of individual learners, work organisations, and education providers (Blume et al., 2010; Juvonen & Toiviainen, 2024; Oosi et al., 2019).

The notion of impact is related to the motivation of employees to participate and willingness of employers to encourage study alongside work. Organisations are responsible for competence development to ensure qualified staff and, consequently, professional care for clients (Konttila et al., 2019; Mlambo et al., 2021; Pires, 2009). UASs and VET institutions have a central role in providing skilled workers for the labour market (Köpsén & Andersson, 2018; Teräs, 2017). They are expected to provide effective training in cooperation with actors from working life and research (e.g., Cronin, 2014; Köpsén & Andersson, 2018).

In Finland, following European recommendations (Carvalho et al., 2023), HVET institutions are responsible for quality assurance, continuous development and evaluation of the effectiveness of their education activities. A specific element of PSE programmes is their contractual agreement between higher education institutions and working life actors. The contractual process and the agreement form the basis for quality assurance. It is recommended that the school-work cooperation network participates in the monitoring, evaluation, and development of the training. Moreover, working-life representatives can participate in quality assurance and development (Kallunki & Seppälä, 2016).

Expansive conceptualisation as the means of learning

According to Engeström et al. (2006), people in today's world of work deal with complex concepts that are neither given nor stable but historically evolving as they are used and re-conceptualised in collective activities. Because of the variety of professional activities with different historical backgrounds, concepts are multivalent and often controversial (Engeström et al., 2006). The impact of PSE programmes is an example of a complex concept that needs to be jointly formulated by education providers, students, and working-life parties based on research-based knowledge. Applying the CHAT approach (Engeström & Sannino, 2017; Gedera & Williams, 2015), conceptualisation can be defined as the means of learning in the 'middle ground' between research knowledge offered for orientation (top-down) and professionals' own experiences of the meaning of the impact (bottom-up) (Engeström et al., 2006; cf. Vygotsky, 1987).

Engeström et al. (2006) point out that complex concepts are future-oriented, which means that they are developed to respond to the evolving needs of a given activity (here, the PSE). To be productive, research-based workshops would have to generate themes that expand the participants' current understanding of the impact of continuous learning programmes for the construction of future PSE. Pursuing the expansion of current understanding is defined in this study as the actions of 'expansive conceptualisation'. In order to specify the expansive

potential of the multifaceted discussion, the discursive data are analysed along several dimensions of expansion (Toiviainen et al., 2022). The analytical framework is presented in the methods.

The underlying theory of expansive learning (Engeström, 1987) is a dialectical theory positing that development and learning are energised by contradictions, ‘as historically evolving tensions that can be detected and dealt with in real activity systems’ (Engeström & Sannino, 2017, p. 106). The expansions analysed in this study can thus be conceptualised as ‘responses’ to developmental contradictions, but in the dialectical frame of reference, expansive solutions also give rise to new contradictions that evolve in the history of a given activity. Engeström and Sannino (2017) point out that contradictions manifest themselves in the form of conflicts, dilemmas, disturbances, and local innovations. In our data, we observe how workshop participants formulate dilemmas in relation to the expansive dimensions of the impact-related themes.

According to the theory of expansive learning (Engeström, 1987), learning and transformation of social practices can take place when the participants’ knowledge creation exceeds the given boundaries of activity and widens, expands, their understanding of the object and their definition of the whole activity system in which they participate. We suggest that the activity theoretical idea of following the object of shared activity (Foot, 2002) provides a fruitful starting point for studying the research-teaching collaboration.

Research questions

The purpose of the analysis of the multi-professional discussion in research-based workshops of the HVET is to explore the potential of *expansive conceptualisation* by the participants from education and working life who were engaged in the research-based knowledge creation exercise. The topic of discussion was the impact of continuous learning programmes, i.e., the professional specialisation education (PSE programmes), targeted at the health and social care sector. The research questions are:

1. What are the main themes through which participants conceptualise the impact of the education?
2. How do the themes expand the conceptualisation of the impact of education?

Methods

Research context and data

PSE programmes are implemented in various professional fields in Finland to promote continuous learning and provide research-based training for the needs of working life. The programmes have been organised by higher education institutions since 2016. One example of PSE is the programme called ‘Expertise in the digitalised health and social sector’ (30 credits), which can be studied in about one year alongside work. PSEs are based on bachelor level degrees and consist of both distance and contact studies (Ahonen et al., 2024; Rauhala & Urponen, 2019).

Those who complete the training should be able to analyse, evaluate, and develop the professional practice of their specialisation (Kallunki & Seppälä, 2016; Rauhala & Urponen, 2019). Training enhances specific professional competence, generic working life competence, and self-regulation competence (Ahonen et al., 2023; Kuoppamäki, 2008). Dialogue between employers, professionals, and educators is emphasised in the design of effective and qualified programmes based on the anticipation of the changes in working life (Clark et al., 2015).

The workshops analysed in this article are an example of connecting research and pedagogical activities in a specific project. The workshops were part of a wider project, SOTETIE (acronym coined in Finnish from Continuing education for social and health care professionals – the Road Map for Lifelong Learning), which focused on evaluating the impact of continuous learning programmes for work communities seen from the perspective of students (employees from work life), work communities and educators. The project coordinators invited participants who had personal experience of the PSE in the role of teacher, student or working life partner.

The workshops took place at two points in time, T₁ (May) and T₂ (June) (Figure 1). A selection of data from these workshops is presented below.

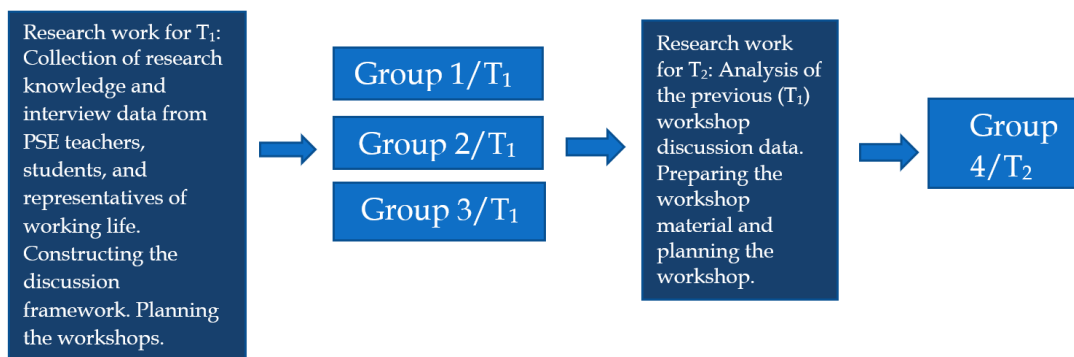


Figure 1. Design of the research-based workshops in May/T₁ and June/T₂ 2020.

The participants worked under the guidance of the workshop facilitators. The facilitators are referred to in this study as researcher-developers. They work at Laurea University of Applied Sciences and Lapland University of Applied Sciences and are responsible for the implementation of the project, data collection, data analysis, workshop planning, and implementation. As an introduction to the first workshops (T₁), the researcher-developers presented orienting material and thought-provoking ideas about the impact of education (Figure 1). They had reviewed literature on the impact of education and interviewed PSE students (15), their teachers (7), and work community mentors (2) to develop an understanding of the impact to be proactively built before, during, and after training. The introduction to the second workshop (T₂) was based on the analysis of the outcomes and highlights of the discussion in the first workshops (T₁). The presentations by the researcher-developers guided the small groups to the discussion, providing ideas for, but not fully defining, the themes discussed (Braun & Clarke, 2019). The definition of the impact-related themes answered the first research question.

Three regional workshops were conducted using video conference software application (Zoom), with a total of five small groups, from which three small groups were selected for analysis based on the data saturation principle (cf. Juvonen & Toiviainen, 2024). In June/T₂, the workshop brought together participants across the regions to form a single small group, with members from the previous groups in May/ T₁. The total number of participants in the three small groups in T₁ was 15, and the working time for the conceptualisation task was 20–31 minutes. The small group in T₂ consisted of seven participants working for 71 minutes. The group discussions were audio-recorded and transcribed verbatim.

There are two reasons for including data from two points in time (i.e., T₁ and T₂): (a) to cover the entire research-based development process described (Figure 1), and (b) to verify that the themes identified in the T₁ discussion data are relevant in the T₂ discussion (not excluding the possibility of new themes in T₂). As no significant changes are expected to have occurred over a period of 25 days, no systematic comparison is made between T₁ and T₂.

Research method

The unit of data in the following analysis is a *speaking turn*. The unit consists of an entire spoken comment by one participant, preceded and followed by a comment by another participant. Speaking turns are treated as discursive actions that construct the discussion (Stasser & Taylor, 1991). An example of a speaking turn is given below (Phase 3). The analysis was conducted in three phases.

Phase 1: Selection of data

The current analysis was preceded by a study (Juvonen & Toiviainen, 2024), in which the data from the May/T₁ small group discussion were categorised into the types of productive interactions (Damşa, 2014), ranging from ‘creating awareness’ and ‘knowledge sharing’ to ‘creation of shared understanding’ and the ‘generative collaborative actions’. The last category describes the discursive actions for generating new ideas and offering innovative solutions. The generative collaborative actions in the T₁ data were interpreted as signalling the possibility of expansive conceptualisation of the impact of education. In Phase 1 of this study, we selected these speaking turns and extended the data to include similar speaking turns from T₂ that were interpreted as generative collaborative actions (excluding other categories). The number of the speaking turns identified as generative collaborative actions was 24 in T₁ and 24 in T₂ (48 in total).

Phase 2: Thematic analysis

The second phase answered the first research question. A thematic analysis was carried out by interpreting the content of the 48 speaking turns selected in phase 1. Phase 2 followed the basic procedure of thematic analysis (Braun & Clarke, 2006, 2019). The themes were identified based on our understanding of the impact of education (see discussion in ‘Perspectives on the impact of education’). Five themes were defined from the thematic analysis (Table 1).

Table 1. Thematic analysis. Five themes, key words, and the number of speaking turns.

Themes	Key words (examples)	Speaking turns (N)
Theme 1: motivational basis regulates the scope of impact	Inter-individual motivation, commitment to work, education costs, more responsibility, incentives	6
Theme 2: collective competence as a basis for impact	Knowledge implementation, sharing, work community’s training, competence envoy	17
Theme 3: work community’s resources for utilising impact	Allocation and division of resources, reduction of hierarchy, new work practices, coordination, support from management, work culture	9
Theme 4: education provider responsible for impact evaluation	Evaluation, cyclic, continuum, equal dialogue, make visible, the voice of working life	8
Theme 5: societal significance and impact for clients	Better services, societal goals, benefits, cost effectiveness, across unit boundaries	8
Total		48

Phase 3: Analysis of dimensions of expansion

The third phase answered the second research question. A theory-driven content analysis of each theme applied the framework of the dimensions of expansion based on the theory of expansive learning (Engeström, 1987). As only the speaking turns in the ‘innovative’ category of generative collaborative actions were included in the analysis, the final aim was to explore their expansive potential in depth. The framework of the dimensions of expansion has been proposed as a means to analyse the learning spaces of professionals in global work (Toiviainen et al., 2022). In a significantly different learning context, these dimensions will be applied heuristically, recognising that definitions are context-specific and that only some of the dimensions listed may be identified in our data. The general description of the six dimensions of expansion is as follows (Toiviainen, et al., 2022).

1. Social-spatial dimension: expansion of collaborative relationships, crossing boundaries of experience, expertise and physical space, and networking to solve problems and create knowledge.
2. Material-instrumental dimension: expansion in terms of designing and redesigning, implementing and developing tools and infrastructures of work that can be shared in community.
3. Moral-ethical dimension: expansion in terms of responsibility and consideration of consequences; who is affected or should be affected?
4. Political-economic dimension: expansion towards fair workplace practices; equality in social, economic, educational and welfare aspects of work.
5. Personal-professional dimension: expansion of capacities, resources, professional fields of activity, life choices.
6. Temporal-developmental dimension: experiences and learning efforts of the professional shaped by turning points on several dimensions; reflection on the contradictions and expansions in the past, present, and future developments.

Each speaking turn was interpreted as expressing one dimension. The following speaking turn illustrates the analysis steps 1–3. It provides an example of a generative collaborative action (putting forward ideas) that addresses Theme 1 (motivation basis regulates the scope of impact), interpreted to manifest the social-spatial dimension of expansion (*more than one person; the whole work community*). Key words and expressions illustrating each theme are bolded in the data excerpts (see key word examples also in Table 1):

This would certainly be an ideal situation if the workers were **motivated** and the management were **motivated**, in good cooperation. [...] And [ideally] **more than one person** from the working community would be willing to participate, or the **whole working community would be involved in a meaningful way**, using such

forms of learning that are meaningful. I think it creates a good spirit of cooperation, or am I optimistic? (Excerpt 1; Participant 10/T₁)

The presentation of the results, summarised in the tables, describes the themes, interprets the dimensions of expansion, and identifies the dilemmas that emerged. The results are presented in a data-driven manner. The theoretical elaboration follows in the discussion.

Research ethics

This research ensured that the participants gave informed consent. In transcribing the data, any directly or indirectly identifiable information was removed to ensure privacy and data protection. In the data examples, speakers are pseudonymised as 'participants' and numbered 1–15. The first and the second authors held the position of researcher-developers in the project analysed. The following is reported bearing in mind that such pedagogical experiments require long-term commitment and are usually researched by the workshop facilitators themselves (e.g., Brown et al., 2022; Sarantou et al., 2021). Aware of their dual role, the researcher-developers collectively reflected on their actions throughout the project (Lichtman, 2017). They collected a systematic corpus of data without leaving any observations unnoticed. The research was conducted under the supervision of the external researcher, the third author.

Results

The research findings describe the five themes that emerged in the workshop discussions and interpret their expansive dimensions and emerging dilemmas. Thus, the analysis answers both research questions. In the following sections, the term 'training' is used to refer to working-life education activities.

Theme 1: Motivational basis regulates the scope of impact

Motivational basis of training was discussed in relation to the impact of education. Motivation can stem from an employee's personal goals of professional growth or from an expected added value to the work community and employer. The claims for the cost distribution of PSE may depend on the educational needs emphasised and whether these are related to personal career development or the capacity building of work communities. Those employees who pay for their training are not necessarily driven by the aim to impact the work community unless compensated via salaries. If the employer bears the costs, the organisation may expect an observable impact in turn. In addition to perspectives of individual and work community, the discussion expanded the

theme social-spatially to cover regional needs for continuous learning programmes (Table 2).

The distribution of costs should be politically and economically fair, considering that resources for capacity building are not equally available across geographic areas in Finland. After completion, trainees could share their knowledge in the role of in-house trainers. This would be a personal-professional expansion increasing a worker’s recognition in health and social care communities. It would strengthen commitment and bring value to the work community and employers’ investment, as described in the following excerpt:

The employer could think that, since the worker [has been] in training, they might be given **responsibility** to act as a kind of consultant or trainer at the workplace because this would also **improve the work-related well-being and responsibility** of a worker. It may also **enhance commitment** to work in the future – as we just discussed how the worker [trainee] would get motivated and committed to the workplace so that **training would not go to waste from the employer’s and organisation’s points of view**. (Excerpt 2; Participant 8/T₂)

Table 2. Summary of Theme 1.

Theme of impact	Conceptualisation	Expansive development/dimensions
1. Motivational basis regulates the scope of impact	Economic and other incentives are involved in the motivation basis of studies. Motives may be based on employee’s personal goals and on value to the work community and employer. The cost distribution of PSE depends on motives emphasised and, thus, on the impact pursued; whether personal career development, the capacity building of work communities, or the development of regional competence networks.	<p>social-spatial: motivational basis expanded socially from individual to inter-individual and community-based and spatially from workplaces to regional competence networks.</p> <p>material-instrumental: from separated learning assignments and course materials to learning infrastructures for sharing training outcomes at workplaces.</p> <p>personal-professional: expanding motivational basis from capacity building in isolated training to new professional fields of activity by earning new responsibility at work.</p> <p>political-economic: motivational basis expanded from narrow cost-benefit policies to welfare aspects and equitable incentives.</p> <p>DILEMMA Multiple layers of motives from individual to regional networks are difficult to bring together and solution is easily reduced to the distribution of costs of education.</p>

Theme 2: Collective competence as a basis for impact

The speaking turns of both the teachers and the working-life participants strongly advocated for the collective aspect of competence development and knowledge transfer (Excerpt 3). It is mainly supervisors' responsibility to be aware of the existing and future competence requirements in work communities and connect individual and inter-individual training needs to the activity as a whole. Involving stakeholders from the working life in planning would ensure that training has an impact on the skills needed.

Table 3. Summary of Theme 2.

Theme of impact	Conceptualisation	Expansive development/dimensions
2. Collective competence as a basis for impact	Supervisors at workplaces must be aware of competence requirements and connect individual and inter-individual training needs to bring impact to work community. Incorporating working-life parties into the educational planning of programmes ensure better definition of competence needs. New study tools and practices for collective competence building were suggested.	<p>personal-professional: from personal training to collective professional competence development managed by workplace supervisors.</p> <p>social-spatial: from academic planning within educational institutions to crossing the school-work boundaries for impactful co-planning with work organisations.</p> <p>material-instrumental: from individual schoolwork to tools and methods engaging the work community and providing instruments for collective competence development (similar idea to Theme 1 on motivational basis).</p>
		<p>DILEMMA How is individual competence turning into collective competence? Who decides the competence development needs?</p>

Collective competence as the basis for the impact of training dominated the discussion in both workshops (T₁ and T₂), and ideas regarding how individual workers' professional development could be expanded to support workplaces were proposed. Tools and practices for collective competence building were

suggested, indicating a material-instrumental expansion of the impact in this context. The use of annual worker-supervisor development dialogues to link workers' and community's needs and making the study materials of training available to the whole community were among the ideas. The trainee could work as a competence envoy, transmitting the latest knowledge to the workplace. This idea - one trainee training others - was questioned based on the profitability loss caused by a potential decrease in the number of students attending training (Table 3).

It should be ensured that it is the **competence of the work community and not one person** being behind it. And what is this competence - is it some kind of individual knowledge, or is it more **knowledge related to the [community's] activity**? (Excerpt 3; Participant 4/T₂)

Theme 3: Work community's resources for utilising impact

The lack of time and human resources in development work were discussed in the T₁ workshops. The participants linked the issue to prioritisation, which may be hampered by management practices, top-down organisational culture, and general attitudes towards employee-led change efforts in workplaces. They called for a dialogue between management and operational work. Two speaking turns referred to learning from existing models and best practices; one about multi-professional work teams imported from the United Kingdom, the other about mutual visits to peers' workplaces. Once again, a special role was suggested as the resource to increase the impact of training - a worker who mediates employee initiatives to management, facilitates development initiatives, and motivates the work community to participate in the process.

Workplaces have to **have structures** in day, week, and month that allow this to happen. You can't just assume that individual employees will develop in their own **time** and maybe even with their own **money**, but development is **part of the job**. There could be **meetings to discuss professional literature**, something like weekly development meetings. The **client can also be involved** at this point. (Excerpt 4; Participant 2/T₁)

The theme of resources was not addressed in the June/T₂ workshop discussion. It is possible that researcher-developers' material was focused on other themes that occupied the participants' working time.

Table 4. Summary of Theme 3.

Theme of impact	Conceptualisation	Expansive development/dimensions
3. Work community's resources for utilising impact	Lack of time and human resources in health and social care, also management practices, top-down organisational culture, and general attitudes towards development work may limit resources. Dialogue in work organisations, learning from others' good practices, an employee's developer role would provide resources for utilising impact of training outcomes.	<p>material-instrumental: expanding from the limits of given resources to creative solutions and learning from best practices and infrastructures developed in workplaces.</p> <p>temporal-developmental: expansion means that learning and development are integrated into, not separated from, daily work hours.</p> <p>political-economical: expansion from hierarchical top-down resource management to the acknowledgement of employees' voices for fair allocation of development resources.</p>
		<p>DILEMMA Resources to realise the impact of education compete with rather than support the investments to basic care work.</p>

Theme 4: Education provider responsible for impact evaluation

Participants discussed evaluation as a means of demonstrating the impact of PSE programmes. According to the UAS representatives, it is the role of the UAS as an education provider to be concerned about the outcomes of the programmes and to be responsible of the continuous evaluation and the development of evaluation tools. Evaluation in dialogue with working life was emphasised and linked to the future planning of PSE. Former students could give feedback on how the training has benefited them and their working community. The training organisation can collect development stories to showcase the programmes. The ideas of the evaluation process, which would serve working life, funders, and organisers' programme planning, can be interpreted as a temporal-developmental expansion from a retrospective to a proactive approach to impact; cyclical rather than linear or retrospective (Table 5).

From the **perspective of the educational organisation**, [the evaluation process is] a kind of **continuum**... In **planning** new education, **involving** former students and [through them a link to] working life, so that it would be more **cyclical**. Instead of just starting again after [the end of the previous] training, it would sort of **continue**. (Excerpt 6; Participant 6/T₂)

Table 5. Summary of Theme 4.

Theme of impact	Conceptualisation	Expansive development/dimensions
4. Education provider responsible for impact evaluation	UASs are responsible for evaluation and development of evaluation tools. Evaluation in dialogue with working life would be important. Former students can be involved in impact evaluation. Evaluation is used for future planning of PSE.	temporal-developmental: expanding the concept of evaluation from retrospective, after-training activity to proactive evaluation in planning future training. political-economical: expanding perspective from educational and economic accountability of educator to shared impact evaluation with work life actors for the benefit of all.
		DILEMMA No dilemmas formulated by professionals in workshop discussion.

Theme 5: Societal significance and impact for clients

Participants recognised that the impact of training should be considered beyond the boundaries of the work community, through the organisation and more widely in the society and in the delivery of timely services to clients. In the health and social care sector, responding to societal needs through training is challenging because needs are difficult to define. In Finland, the prolonged reform process forced the developers to pause their work while awaiting the outcome of the reform, which was unfavourable for planning individual courses with high impact content. Another dilemma discussed was that long training courses often do not lead to a degree that would serve as a form of societal recognition of education (Table 6).

Often the work of developing and reviewing effectiveness is focused on a single department or unit where the work is done... But the effectiveness should be looked at **beyond the boundaries of the unit**, more broadly throughout the organisation, and also at **societal effectiveness**, what it can produce, and what is needed at the moment. We should look **beyond the area** in which we operate [...]. Effectiveness should also be examined **at the level of society and from the client's point of view**. (Excerpt 7; Participant 7/T₁)

Table 6. Summary of Theme 5.

Theme of impact	Conceptualisation	Expansive development/dimensions
5. Societal significance and impact for clients	The impact of training should be examined beyond the boundaries of the work community in relation to society and clients.	<p>social-spatial: the perspective on impact expanded from (intra)organisational to societal needs of expertise and from workers' training to client services.</p> <p>personal-professional: expanding worker's individual personal-professional goals to embrace the goals of producing good services to the clients.</p>
		<p>DILEMMAS</p> <p>Uncertainties in the health and social sectors make it difficult to plan effective training.</p> <p>The PSE studies are still weakly recognised in society.</p>

Discussion and conclusion

This study contributed to the knowledge of research-teaching collaboration in HVET by analysing the 'expansive conceptualisation' by the practitioners of education and work life in research-based development workshops. The workshops were part of the national project targeting the impact of PSE programmes. The integration of research and practice-based knowledge is needed to find the way to prove the effectiveness of continuous learning while guiding the educational planning and research of the UASs (Rauhala & Urponen, 2019). Following the object of activity (Engeström, 1987; Foot, 2002), in this case the conceptualisation of the impact of continuous learning programmes, we focused

on the impact-related expansions and the dilemmas in the workshop discussion. The analysis revealed five themes of impact, which the participants developed and further expanded on multiple dimensions through the actions of expansive conceptualisation (Toiviainen et al., 2022). In the framework chosen the dimensions of expansion helped in specifying the participants' ideas of the impact of education as generated in the workshops. The 'moral-ethical' dimension was not recognised in this data, but it would be interesting to analyse related to the equal access to impactful work-life education and continuous learning (Mackaway et al., 2024). In the following, the theme-specific expansions (tables 2–6) will be synthesised with a selective reference to single dimensions.

The motivational basis regulating the scope of impact (theme 1) addressed individual and collective motives, incentives, and outcomes related to continuous learning. The scope of impact was expanded social-spatially to cover individual, work community, and regional needs. Different levels of work-related learning have been discussed in the former research recognising the socio-cultural links between employee learning and work community learning (Mlambo et al., 2021; Pires, 2009). Joynes et al. (2017) suggest that technology used in work practices can support informal learning, not only for individuals, but also for teams and organisations. Nevertheless, integrating the motivational bases across levels was challenging for the participants. The dilemma concerned the costs of the education, whether it was the employee's own investment or employer's, which determined the scope of impact. The costs emphasise the political-economic dimension at the expense of personal-professional and material-instrumental dimensions of motivational basis. Expanding the latter would enhance a better integration of PSE studies in the work and workplaces (cf. Tynjälä et al., 2022).

Collective competence as the basis for impact (theme 2) of the work-related learning programmes was emphasised in the project and mediated by the researcher-developers to the workshop discussion. Expansive ideas for improving collective competence building through PSE were developed, such as strengthening the co-planning with workplaces (social-spatial expansion) and opening the study materials to the work community (material-instrumental expansion). At the same time, transformation of a trainee's individual learning outcomes into collective competence posed a dilemma, that can be seen as the problem of knowledge transfer at the interfaces of vocational schools and working life. Researchers of activity theory have presented the concept of 'developmental transfer' in the boundary zone of school and work, which calls for the creation of knowledge through collective activities in the boundaries of multiple organisations (Garraway & Winberg, 2020; Konkola et al., 2007; McMillan, 2009; Tuomi-Gröhn & Engeström, 2003). The pedagogically challenging boundary between school and work, which creates complexity in the

work of VET teachers, has been analysed in previous studies (Enochsson et al., 2020; Köpsén & Andersson, 2018).

The resources of the work community to utilise impact (theme 3) triggered discussion about the allocation of time, organisational culture, and managerial values towards workplace learning activities. Focusing on the work of nurses, the review by Mlambo et al. (2021) confirms that continuing professional development (CPD) requires resourcing to make learning opportunities accessible, relevant, and properly funded. The message is addressed to organisations, nurses, policy makers, and education providers. Our study further specifies that resources for impactful CPD may spring from learning from others' material-instrumental solutions and from giving voice to employees' ideas. Better temporal-developmental integration of work, development, and learning might help the management to see investments to education as reasonable investments to good care work. Smith and Billett (2006) point out that employers' readiness to invest in training is shaped by local factors, policy traditions, and histories and, thus, unique to each country and usually deeply rooted in local tradition and culture.

The responsibility of education providers to evaluate impact (theme 4) was clearly emphasised by teachers. An evaluation model was envisioned by expanding the evaluation social-spatially to include students and working-life partners and temporal-developmentally by understanding evaluation as cyclical – i.e., not as the culmination of educational courses, but as the starting point for planning new ones. There is a need to develop evaluation methods with different approaches, that take into account the changing learning needs of different parties (Räsänen & Rökköläinen, 2014). No dilemmas were formulated regarding the responsibility for evaluation. We see that it is a dilemma for the HVET institutions to be responsible for impact evaluation, while the quality strongly depends on the motivation and commitment of all parties, including workplaces, to the training (Littke & Thang, 2015).

The last theme (theme 5) discussed the societal significance of PSE programmes and the impact on clients. This signals a social-spatial expansion to consider impact from a broad perspective beyond the immediate context of education and work. Personal-professionally, participants expanded the idea of individual competence building to have a positive impact on patient care. To date, the research evidence to support the link between CPD and improved quality of care is limited (Mlambo et al., 2021). Impact at the societal level appeared to be dilemmatic to influence through the institutional means available to professionals (Batterbury & Hill, 2005).

The findings shed light on the conceptualisation of the impact of the continuous learning programmes and demonstrated the possibility of productive knowledge creation in and through development projects. This was found to be

the case even in online workshops under the pandemic restrictions when the researcher-developers had to pay special attention to pedagogical facilitation in order to mediate the research-based material into the discussion.

This study has some limitations. First, because the analysis is framed around the actions of the participants, the links between the contributions of the researcher-developers and the expansive actions of the participants cannot be identified. Nevertheless, the approach built on an ongoing dialogue maintained by the researcher-developers in their dual roles as knowledge producers and workshop facilitators. Second, this study followed a short period of a larger project and selected four small groups from many in the regionally scattered workshops. A larger sample might have revealed new themes and insights into the dimensions of expansion, thereby broadening the understanding of the impact of education in this particular context. Finally, the framework of dimensions of expansion was applied to a specific cultural-historical context of health and social care education in Finland. Future workers, their educators, and researchers of care services are faced with the challenge of continuous learning, and in public discussions this is linked to concerns about the survival of the welfare state. The dimensions of expansion have been interpreted from this perspective.

Given the topicality of knowledge creation at the intersection of research, education, and working life, there is a need for further investigation of the outcomes of the collaboration fostered in the projects of HVET institutions. This study identified five themes for conceptualising the impact of continuing learning programmes. The research-based workshops were productive in bringing together experts from different fields and providing a space for them to discuss complex issues that require different perspectives to find solutions. We see a lot of expansive potential residing in the collaborative knowledge creation between the HVET teaching, research, and working life.

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Conflict of interest

The authors declare no conflicts of interest.

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Developing of knowledge in practice-based research: Research circles as an example

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Abstract

The article deals with the research circle method as a way of conducting practice-based research. Based on data from a research project about drop-out in vocational education and training we analyse the process of generating knowledge and the researcher's role in this process. The empirical data include written material from the circle work and interviews with the practitioners in the research circles concerning the knowledge developing process.

Three kinds of knowledge have been generated: Knowledge based on the practitioner's experiences, knowledge based on an interplay between existing practical knowledge and research-based knowledge, and new research-based knowledge. In the article we characterise the three types of knowledge and account for the challenges related to the knowledge generating process. Furthermore, we describe the researchers' roles related to developing the three kinds of knowledge. Based on data from the project, we argue that bridging the gap between practice-based and research-based knowledge requires the ability to transform theoretical knowledge to apply the knowledge in real-world practices.

Keywords: action research, practice-based research, research circle, practice-based knowledge, vocational education and training



Introduction

This article deals with developing knowledge in practice-based research. By practice-based research we understand research based on data founded in actual situations and contexts giving insight in these contexts. Opposite to e.g. practice-related research we see practice-based research closely related to the specific context. In the article, we present action research as a kind of practice-based research.

Basically, the purpose of action research is solving a relevant practical problem through a combination of action and research. Both actions and research are conducted in collaboration between researchers and practitioners. In the article, we account for various challenges using action research. One challenge is how to combine practical knowledge with theoretical or research-based knowledge. Another challenge is the researcher's role in the interplay with the practitioners.

To elaborate insight in these two challenges we present data from a completed research and development project concerning dropout in Danish vocational education and training (VET) in which we employed the research circle method. The research circle method can be seen as a Nordic model for action research. In the project, researchers and teachers cooperated on activities that – underpinning the students' decision-making processes – aimed at enhancing the students' completion of the education.

Three kinds of knowledge building process are immanent in the action educational process. The first knowledge process concerns building practice-based knowledge through gathering and systematising the practitioner's experiences. The second knowledge building process deals with developing a meaningful connection between the practitioners' existing practice-based knowledge and research-based knowledge. The third process concerns generating new research-based knowledge about the ongoing activities. In the article we elaborate the three kinds of knowledge-building processes and the challenges related to the process, with the aim of explicating the researchers' responsibilities related to organising research circles in a way that ensures the development of new knowledge. Based on data from the project, we argue that bridging the gap between practice-based and research-based knowledge requires the ability to transform theoretical knowledge for application in real-world practices.

State of the art

The state of the art related to this study encompasses results from research into practice-based research, action research as practice-based research, and research-circles as practice-based research, the latter including an example of research-circles.

Practice-based research

In an educational setting, the meaning of the concept of 'practice-based' research has been discussed and analysed from different perspectives. The relation between practice and research is often described as constituting a gap: between theory and practice, between research-based knowledge and practice-based knowledge, or between researchers and practitioners (Broekkamp & Hout-Wolters, 2007). Some researchers regard this gap as a serious problem that must be bridged to provide practitioners with access to research-based knowledge (Ulvik et al., 2018), which requires the translation of research-based knowledge to practice contexts (Wahlgren & Aarkrog, 2020). Some regard the gap as a purely epistemological problem (Papastephanou, 2014), while others view it as a gap between different professional cultures (Korthagen, 2007) and different institutional contexts (Scanlon, 2018). Kemmis writes that the problem is 'not so much in closing the "gap" between theory and practice, but in closing the gap between roles of theorists and practitioners' (Kemmis, 2009, p. 468). Following Kemmis, in this article, we focus on the researchers' roles with a focus on generating the three kinds of knowledge.

Action research as practice-based research

The main principle of educational action research is to contribute to solving problems and changing practice for the better. In many cases, such improvement takes place through teachers' active participation in the research process; however, the nature of this participation varies. Some educational action research projects are conducted as 'learning studies' aimed at improving the practice of teaching (Johansson, 2017) and gaining new insight into learning processes by making the teachers co-researchers (Thorsten, 2017). Some are designed as 'clinical' (practical) research to develop new professional knowledge (Bulterman-Bos, 2017). Some constitute 'a way of linking educational academic research and teaching practice, aiming at increasing professionalism in teaching, by extending the knowledge base on teaching and learning' (Admiraal et al., 2017, p. 316). Finally, some are conducted as 'inter-professional' collaboration between researchers and teachers to train the teachers' pedagogical approach to a new curriculum initiative (Hiim & Stålhane, 2018). The importance of 'common relevance, shared responsibility for research, and mutual trust and respect for differences in professional identities' are important (Leeman et al., 2018, p. 9). Most action research projects concerned with school development focus on engaging teachers in the research process, whether the emphasis is on making teachers aware of tacit knowledge (Bulterman-Bos, 2017), improving their classroom practices in VET (Saunders, 2012), training mentors (Raaen, 2017), or teacher training in general (Gibbs et al., 2016). A recurrent perspective in these

studies is the different relations and sorts of collaboration between researchers and practitioners.

Some studies focus on the impact on a changed school practice. Karagiorgi et al. (2018) showed how school leaders were able to transform their experiences from an action research project into improved educational practices. With support from researchers and through systematic reflection in diaries, the school leaders were able to improve their own practices and the school's educational outcomes. Similarly, a study of interactions between school leaders and researchers found 'that the thematic and theoretical inputs of the program, practical training, and learning modes stimulated transformations of the principals' thinking and talking about school and leadership practices, what they do in practice, and how they relate to others and the circumstances around them' (Aas et al., 2020, p. 223).

Some studies analyse the conditions for cooperation between researchers and practitioners. Motivation, trust, mutual respect, and resources (particularly time spent) have been mentioned as important conditions for successful cooperation (James & Augustin, 2018). The practitioners' ability to reflect on their own practice was mentioned in another study (Luttenberg et al., 2018), while a study on facilitating evidence-informed teacher practices underlined that the stakeholders' different expectations must be 'negotiated', and that practitioners must be involved in the process of translating research-based knowledge into practice (Flynn, 2018, p. 17). Another study explored how to develop a research relationship between researchers and school leaders, which the authors referred to as a school/university alliance. As part of this alliance, the researchers asked the school practitioners to reflect on and write down their thoughts and feelings about being part of a research project, using their reflections to develop a productive research relationship (Solvason et al., 2018). Practice-based research and the work in the research circles presupposes a social contract that is based on common interests (Raaen, 2017).

As such, the process of collaboration between researchers and practitioners is a vital element of action research. However, this process is not straightforward or problem-free. The studies mentioned above identify various challenges, e.g., different goals, different expectations, different competencies, lack of mutual respect, and, not least, the problem of connecting theory and practice.

Research circles as practice-based research

Research circles can be defined as action research involving intensive collaboration between practitioners and researchers that is embedded in an organisational structure with a clear division of labour between the two groups (Rönnerman & Olin, 2014). Research circles are a way to organise such collaboration in pursuit of a solution to a real-world problem. They can be

characterised as 'collaborative action research' (Rönnerman & Salo, 2012; Wells, 2009) and as 'participatory action learning and action research' (Zuber-Skerritt, 2018). Studies indicate that the research circle have a high impact on practice (Gottlieb & Sørensen, 2018; Mariager-Anderson et al., 2020; Persson, 2008).

Research circles are organised as a series of planned meetings (circle meetings). At these meetings, the practitioners present their practical experiences and practice-based knowledge, while the researchers present theories and research-based knowledge. Between the circle meetings, the practitioners implement and test the knowledge presented at the previous meeting, and the researchers gather data and systematise knowledge. The research circle is based on the participants acting as reflective practitioners (Schön, 1983), and the learning circle method alternating between action, reflection, and experience can be conceptualised by Kolb's learning circle (Kolb, 1984). The work in the research circles takes place over a longer period – normally a year or more.

Research circles differ from similar kinds of collaboration, such as study circles or learning circles, in that researchers participate in the circle work. It can be difficult to distinguish sharply between the different kinds of circle activities, and in some contexts, the terms learning circles and research circles are used interchangeably (Aakjær & Wegener, 2023; Ndlela, 2019). However, the term research circle signifies a collaboration involving two different kinds of competencies: researcher competencies and practitioner competencies.

The literature on research circles seems to agree that researchers should contribute with new knowledge. Persson argues that practitioners should 'read and understand the research relevant to the current field of interest' (Persson, 2008, p. 11, translated from Swedish). However, Holmstrand and Härnsten (2003) conclude that 'a method for transferring scientific knowledge does not seem to exist' (p. 29; translated from Swedish); instead, 'the researcher needs to present arguments for the usefulness of research-based knowledge' (p. 31, translated from Swedish). Other action research projects also found linking theory to specific actions difficult (Ulvik et al., 2018). According to Hermansen and Mausethagen (2016), teachers' application of 'abstract kinds of knowledge' requires 'translation'. The simpler and more concrete the research-based knowledge is, the easier it is to apply to practice through specific actions (Dreer et al., 2017; Lancaster et al., 2012).

As mentioned above, two issues arise in the practice-based research process: The first issue is the knowledge production process, including the relation between practice-based og research-based knowledge. The second issue concerns the researcher's responsibilities related to the cooperation between practitioners and researchers based on their different roles, different goals, and different competencies.

To shed light on these two issues we present findings from a practice-based research project conducted as research circles in a VET-setting answering the following research questions:

- What characterises the three kinds of knowledge building process?
- Which roles do the researchers have in the knowledge building process?

Research circles: An example

In a research circle project conducted 2017–2019, the purpose was to contribute knowledge and experiences that can reduce dropout rates at vocational schools (Mariager-Andersson et al., 2020). Through the activities carried out at the participating vocational schools, knowledge was developed about the decision-making processes that led to young adults dropping out of education. Based on this knowledge, specific training methods were developed to reduce dropout at the schools.

In the project, three research circles were established. Each research circle included about 10 practitioners from five vocational schools, as well as two researchers. The practitioners included managers, guidance counsellors, and teachers. The circle-members met regularly, three times a year for three years. The two researchers participated in each meeting. Between the circle meetings, the practitioners conducted activities aimed at reducing dropout at their schools. The practitioners were obligated to reflect on the results of the activities and gather experiences to be presented in the circle work as a part of the practice-based knowledge.

In the current project the researchers visited the schools between each research circle meeting to keep themselves informed of the activities and to gain insight into the implementation process. As a part of these visits data about the implementation were collected.

Each research circle meeting – with a duration on six hours – followed a fixed agenda, which included the researchers' presentations of research-based knowledge related to dropout and the practitioners' presentations of their experiences conducting the various activities at the schools in the periods between circle meetings. These experiences were discussed and analysed, and information was exchanged among the schools. The research-based knowledge presented at the meetings was likewise discussed with a view to possible real-world applications. Each meeting was concluded by the participants agreeing on a plan for the next activities until next meeting.

Data collection

The main goal for the research and development project was reducing the dropout rate at VET-schools with data collected to study the students' decision-

making processes in relation to staying or dropping out. However, in this article we focus on our study of the research circles. In this study, data was collected to shed light on the researcher's role in relation to the generation of new knowledge and in relation to interactions of researchers and practitioners. The collection of these data included two methods: systematic gathering of experiences at the end of the circle meetings, and interviews with the practitioners (Cohen et al., 2011; Wahlgren et al., 2018).

The first method included summaries from the various research circle meetings, including the practitioners' narratives about the activities conducted at the schools. At two circle meetings – one at midway and one at the end of the project – the practitioners were asked systematically about what and how they had learned from the researchers. The practitioners were asked to reflect individually on their learnings; afterwards they were instructed to discuss their personal experiences with colleagues from their school. The answers were recorded and written down. Thus, data includes written notes taken by the researchers about the practitioner's consideration of the interaction between us and them.

The second method of data collection included interviews with practitioners from each school. A total of twelve interviews were conducted, of which five were individual interview and seven focus group interviews. These interviews included questions about the knowledge that the practitioners had gained from the collaboration process, divided into two themes. The first theme concerned the knowledge and experiences the practitioners had gained through the work in the research circles. The practitioners were asked the following questions: 'Please tell us what you have learned from the work in the research circle?' and 'Which of these learnings do you use in your daily practice?' Having answered these questions, the informants were asked whether they had obtained specific kinds of knowledge, e.g., knowledge about preventing dropout, knowledge about different types of decision-making processes, knowledge about data collection methods, or knowledge about theory. It was all issues presented by the researchers in the project. The second interview theme concerned how this knowledge acquisition took place, asking the practitioners the following questions: 'In which situations do you feel that you have learned something?' and 'How do you perceive the interaction between the practitioners and between the practitioners and the researchers?'

We have analysed the data according to the following principles: First, we collected the statements that provided information about the knowledge that the participants had obtained. Then we categorised the statements in relation to practice-based knowledge and practice-research related knowledge. Third, we chose statements with the same kind of content in all three research circles. The

criteria for the selection of the statements that we bring in this article are that they must be typical, comprehensible, illustrative, and relatively context independent.

As a validity check, we have presented both statements and conclusions to the practitioners as part of the research circle work.

Based on the data, we have identified two distinct processes of knowledge-building as part of the research circle work: systematising practice-based knowledge and linking practice-based and research-based knowledge. However, in the development project a third kind of knowledge building was included, namely generating research-based knowledge, in which the practitioners were only partly involved. We outline these processes in the following, accounting for the researchers' responsibilities in relation to the processes.

Concerning the ethical issues, data collection took place in agreement with the practitioners, who have accepted that we use their contributions and the interview recordings for research. The collected data and the conclusions drawn on that background have been presented to the practitioners and discussed as part of the circle work to comment and accept before publication in the final report.

Results

Below we present the results from the study structured in three themes: systematising practice-based knowledge, linking research-based knowledge and practice-based knowledge, and generating research-based knowledge.

Systematising practice-based knowledge

In the research circles, practice-based knowledge was constructed from the practitioners' experiences. The construction includes two processes: formation of experiences and exchange of experiences.

The *formation of experiences* required participants to reflect on what they had learned from the activities they had conducted at their school since the last circle meeting. The question guiding this reflection process was: What do the experiences mean for my practice?

The *exchange of experiences* in the research circles required participants to present their experiences in a way that the other participants could understand and apply to their own practice. As such, the formation process had to include a transformation, translating participants' personal experiences into a mode that they were able to describe and discuss. This was in itself a learning process. The exchange of experiences involved linking one's own experiences to the experiences of the other participants, supporting learning by providing other perspectives on one's own experiences and exposure to new experiences.

During the circle work, the practitioners highlighted the *exchange of experiences* as the project's most important contribution. Exchanging experiences with

practitioners at other schools inspired participants to change and improve their own practice. The practitioners exchanged their experiences using specific methods, e.g., distinguishing between the students' 'ability' to complete the training course and their 'desire' to continue at the school. Meanwhile, many of the participants were inspired by another distinction: 'You are inspired by the others; we knew nothing about any of the schools other than our own. We have stolen the concept of "can-will" [whether the student can accomplish or will accomplish a task] because we think it clarifies what we do at our school.' Likewise, the participants discussed and brought specific career guidance methods with them back to their schools, or copied specific techniques, such as questioning techniques, from each other.

The systematisation of practice-based knowledge had a significant effect on participants' everyday lives. It provided useful knowledge that could be transformed into new actions. Meeting each other and exchanging experiences was rewarding because it 'keeps your nose to the grindstone', as one of the participants put it.

The work in the research circles was based on the development of concrete activities, as the following statements indicate. One guidance counsellor explained: 'We have changed our practice, meaning that the guidance counsellor now joins the team at an early stage and that the guidance begins before the student has too much absence.' Another told us: 'We have begun to evaluate our efforts much more. It takes time, but we have had positive results.' A third guidance counsellor stated: 'I have begun to reflect on my own guidance practice. Doing so has given me new energy and had a positive effect on my daily life'.

The *formation of experiences* required the participants acting as reflective practitioners (Schön, 1983). It was a prerequisite for the work that the participants were able to reflect on their experiences when implementing new activities in their daily practice. They had to be able to articulate these experiences in a way that could be communicated to others.

The researchers' task in connection with the systematisation of practice-based knowledge was to train the practitioners to reflect systematically throughout the project. This was done by continually asking the practitioners questions such as: What have you learned from what you have done (since the last circle meeting)? As one of the teachers put it: 'It's good to be involved in something where you are forced to think about what you are doing. An important part of that is continuously having to tell others what you have learned'.

Linking research-based knowledge and practice-based knowledge

The basic rationale of a research circle is to create a functional connection between the research-based knowledge that the researchers bring into the collaboration and the practice-based knowledge that the practitioners either already have or

develop during the project. Linking these two kinds of knowledge supports and qualifies the goal of solving a specific problem (Wahlgren & Aarkrog, 2020).

In the project, the researchers presented knowledge that could contribute to a better understanding of the students' considerations and decision-making processes related to dropping out. This knowledge included: reasons for dropping out related to the concept of motivation (Rumberger & Rotermund, 2012), self-determination theory (Deci & Ryan, 2000), and the concept of self-efficacy (Bandura, 1997), as well as strategies that students use in decision-making processes (Lessard et al., 2008). The researchers also presented knowledge gathered during the project, such as a typology of the students (Wahlgren et al., 2018) and students' 'decision curves' (Aarkrog et al., 2018).

The data showed that the practitioners perceived the research-based knowledge as important and useful. According to the practitioners, the theoretical presentations were important, as working with theory and theoretical concepts increased their understanding of practice. One of the teachers explained: 'Every time you [the researchers] have placed the empirical data in a theoretical context, I think: What am I actually doing?', before underlining: 'It is important that the theory is closely related to what we do in the schools.'

In the interviews, when talking about applying this research-based knowledge, the practitioners focused on whether they could recognise the theoretical concepts in practice. For example: 'The four types of students are important; [it is] a new tool in terms of [providing] the support students need. It can be translated [to practice] because the types are identifiable'. Or: 'The paper about the students' strategies has been presented many times at meetings with guidance counsellors and teachers [at our school]'. Finally, a practitioner talked about the theory of goal orientation: 'Our experience from the project is - in contrast to where we started - that we have to think in terms of setting small goals and sub-goals for the students, rather than more long-term goals or overall goals.'

The research-based knowledge provided the practitioners with a common language, which they could use in their work at the school. One guidance counsellor explained: 'There is also something about a common language. What are we talking about here? The more times we meet, the better the common language [...] we lack a common language to talk about what is at stake'. A teacher stated: 'The fact that we are now talking about decision-making processes and not just about dropout numbers has changed our focus in the work we do'.

As part of the research-based knowledge, the practitioners acquired skills in collecting data. They used this knowledge to guide their students: 'We have used the interview guides that were made for the student interview in the project', one guidance counsellor said, with another adding: 'We have become more aware of how the students express themselves when they explain something. We dig

deeper into their reasoning about staying away from school'. Thus, the practitioners used the experiences gained from interviewing students in the project in their own practice guiding students.

For the practitioners, it was important that the interview guides and data collection methods provided concrete tools, which allowed them to use the theory in practice: 'Every time we have been to a research circle meeting, I have been given a tool. It could be, for example, the scheme that one of the researchers had made about strategies in connection with stopping or staying; it makes sense because it is concrete, and when I am interviewing a student, I can follow this guide and when I encounter something new, I can change the interview guide a little.'

The experiences from the project showed that practitioners made use of concrete knowledge and methods, while abstract theoretical knowledge primarily provided a framework for understanding and talking about what happened in practice. If the abstract knowledge is to be put to more active or practical use, it must be 'translated' into practice. In the project, we were surprised that a large part of the research-based knowledge that we presented during circle meetings was not used – nor was it mentioned in the interviews as something that had made an impression on the practitioners or that they could remember.

The researchers' task in connection with linking research-based to practice-based knowledge is to choose research-based knowledge that is relevant to the specific practice context and to bring this knowledge into play during the work in research circles. Central to this process is the translation of research-based knowledge into concrete and specific methods for use in practice. This translation must enable that the theories can be applied and tested in practice.

The translation takes place at the circle meetings, where researchers and practitioners together discuss the relevance and applicability of the knowledge presented, and when the practitioners apply the 'theory' to their own practice. In the project, practitioners had to discuss and plan how they could apply knowledge about different decision-making processes and decision-making patterns within their practice. In this process they needed guidance from the researchers.

Thus, linking research-based and practice-based knowledge is an interactive process, where the research-based knowledge must be transformed and applied to specific practices.

Experiences from the project showed that the closer the content of theoretical knowledge to the concrete practice, and the more time the researchers spent on guiding the practitioners to exemplify how theoretical knowledge can be translated into concrete and specific actions, the more likely it is that this knowledge will be used.

Generating research-based knowledge

In the project, a quite extensive data collection took place parallel to the developmental activities. Data were collected about students' decision-making patterns (Aarkrog et al., 2018), about the relation between decision-making processes and the current training programmes (Wahlgren et al., 2018), and about 'decision curves' at the individual student and at class levels (Gottlieb & Wahlgren, 2018). Finally, data were collected concerning the links between students' goal orientation, the teachers' career guiding activities, and dropout rates (Aarkrog & Wahlgren, 2022).

In this systematic process of gathering data, the researchers sometimes faced dilemmas arising from differences in the researchers' and practitioners' respective goals and interests. The practitioners wanted to develop and implement activities preventing dropout, whereas the researchers aimed at generating theoretically based knowledge about the various factors influencing dropout processes.

In the project, we have solved this dilemma in two ways. One is that we clarified how the practitioners could use the collected knowledge as part of the research circle work. Thus, the researchers presented the knowledge they had generated to the practitioners. The other way was inviting the practitioners to play an active role in data collection, participating in the interviews to train them to think in a research-based way.

This dilemma - the alternation between qualifying the research and qualifying the practical applicability - challenges the researcher's role. It includes the educational processes of conveying the research results continuously to the practitioners and guiding the practitioners to apply this data and to participate actively in the data collection process.

Discussion

To what extent can the results found be generalised to other sorts of practice-based research? Are the three kinds of knowledge generation relevant and recognisable in other kinds of practice-based research? Are the roles attributed to the researchers in the practice-based research in the study dependent on the particular context or are the roles a necessary part of a practice-based research in general?

In response to the first question, we have dealt with a specific sort of practice-based research, namely the research circle as a kind of action research. As previously described, in this kind of research, collaboration between researchers and practitioners is essential in connection with solving a concrete problem. In our case, the collaboration concerned reducing the dropout rate in VET. However, we argue that the three processes of knowledge generation are an

immanent part of practice-based research, which deals actively with the solution of a relevant problem in collaboration between researchers and practitioners. The three sorts can be weighted differently depending on the current cooperation and problem. However basically, this kind of research includes all three dimensions: generating practice-based knowledge, linking research-based knowledge and practice-based knowledge, and developing research-based knowledge.

Another characteristic of practice-based research is the interaction between researchers and practitioners. To understand the empirical results presented in the article, it should be emphasised that the project was initiated by the researchers. Consequently, they were responsible for initiating and coordinating the work in the research circles (also discussed by Thomsen et al., 2017), causing an asymmetry in the coordination and ownership of the activities in the research circles. Meanwhile, there was also a symmetry based on a common interest in solving the problem at hand.

We argue that caused by the division of labour in the circle work, there will always be an asymmetry between researchers and practitioners. The asymmetry can have different shapes, depending on the specific context and on the skills and experience the practitioner brings to the collaboration. No matter what, the researchers possess research skills that will drive the development and systematisation of knowledge. As shown in our findings, researcher competences have different content and different influence on the three kinds of knowledge building process: least in the systematisation of practical experiences and most in the creation of research-based knowledge. Based on our data, the most difficult process is linking practice-based and research-based knowledge.

Concerning reliability, we found similar data in the three research circles that have been completed (regardless of which researchers led the circles). Concerning validity, we have selected the examples and statements from the data that most clearly illustrate the informants' typical point of view. We have presented the statements in a way that enables other researchers (readers) to assess the meaning of the statements. As mentioned above, we have presented both statements and conclusions to the practitioners as part of the research circle work. The practitioners' comments have confirmed our interpretation of their statements.

Conclusion

In the article, we have focused on the interaction between research-based and practice-based knowledge in research circles. In the research circles at the core of our analysis, we observed changes and improvements of practice. The practitioners learned from their own and others' experiences, and they used the

research-based knowledge presented during circle meetings as a conceptual framework as well as a set of methods for understanding and improving practice.

Based on our findings, we conclude that researchers have three primary tasks in research circles: ensuring a systematic and reflective conceptualisation of experiences; ensuring that the research-based knowledge is translated into practice; and collecting systematic data while ensuring a synthesis of practical experiences and existing theory. For this to succeed, the practitioners must be capable of compiling and (collectively) systematising their experiences and transforming them to actions in practice. However, this requires the researchers' guidance and training of the practitioners. Such a guidance and training strengthen the asymmetric relation between researchers and practitioners and must be considered as a part of the collaboration.

In the project, we found that it was difficult to apply research-based knowledge in practice. We therefore conclude that the use of research-based knowledge requires a particular effort: in research circles and in action research in general, research-based knowledge must be translated into concrete actions that contribute to solving real-world problems: the research-based knowledge must be action indicating. The researchers must ensure that the practitioners are involved in this translation process. The application of research-based knowledge in practice requires the translation of key concepts and, not least, the time to 'translate' and apply existing knowledge.

Against this background, we suggest that the challenge when translating research-based knowledge into activities in practice is to make the process of translation part of the activities in the research circles.

We see the relation between research-based knowledge and action in practice as an everlasting problem which still needed to be further investigated.

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Forsker-praktiker-samarbejde som et ligeværdigt videns- og læringsrum: Et didaktisk anliggende

Creating knowledge equity and a social learning space in
practitioner-researcher collaborations: A didactic perspective

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Abstract

This article explores collaboration between research, education, and practice in vocational education and training, framed as a knowledge triangle. The purpose is to offer insight into how knowledge triangle collaboration can be designed didactically to facilitate an equitable knowledge and learning space, in which the perception of research as the producer and owner of knowledge and idea of knowledge transfer are reconsidered. Based in a self-study methodology, empirical experiences from a network meeting between researchers and practitioners are analysed. The theoretical exploration of knowledge collaboration is done in two parts. Firstly, by referring to Dewey's understanding of knowledge, didactic principles for a network meeting are analysed. Secondly, Wenger-Trayner and Wenger-Trayner's conceptualisation of social learning spaces is used to understand interactions between didactic principles and network participants. The study highlights the importance of embracing uncertainty and maintaining self-critical dialogue in knowledge collaboration. Ethical considerations arise regarding egalitarianism in researcher-practitioner collaboration, emphasising the need for ongoing dialogue and adaptation.

Keywords: knowledge triangle, practitioner-researcher collaboration, self-study, learning space, vocational education and training



Introduktion

Formålet med denne artikel er at undersøge og skabe dialog om de (u)muligheder, der åbner sig, når forsker-praktiker-samarbejder inden for erhvervsuddannelsesfeltet tilrettelægges med henblik på at skabe rum for videnskabelse på en ligeværdig og lærende måde. Med dette formål skriver artiklen sig ind i studier, der tematiserer forsker-praktiker-samarbejde som en læreproces. Studiet er gennemført i en erhvervsuddannelseskontekst, i relation til de danske social- og sundhedsuddannelser (SOSU), der uddanner social- og sundhedshjælpere og -assistenter. Med artiklen argumenterer vi for, at forskningssamarbejde ikke af sig selv bliver et ligeværdigt videns- og læringsrum, men kræver didaktisk bevågenhed. Hensigten med artiklen er at bidrage med indsigter, der kan inspirere til videnssamarbejde mellem forskning, uddannelse og private/offentlige organisationer inden for erhvervsuddannelsesområdet. I artiklen undersøges muligheder og umuligheder ved didaktisk tilrettelæggelse af et forsker-praktikernetværksmøde med det formål at skabe et ligeværdigt videns- og læringsrum.

Artiklen er struktureret på følgende vis. Første del problematiserer med henvisning til begrebet *videnstrekanten* en privilegering af viden som noget, der først produceres af forskere og derefter overføres til praksis. Vi argumenterer for at tilgå forsker-praktiker-samarbejde som et ligeværdigt videns- og læringsrum, der påkræver didaktisk bevågenhed. Anden del redegør for undersøgelsens selvstudie-metodologi og pragmatiske afsæt, herunder beskrives den empiriske kontekst, grundlag og proces for studiets todelte analyse. Første analysedel undersøger, med afsæt i Deweys (1929) vidensforståelse, centrale didaktiske principper for tilrettelæggelse af et forskerpraktiker-netværksmøde. Anden analysedel undersøger ved hjælp af Wenger-Trayner og Wenger-Trayners (2020) begreb om sociale læringsrum deltagernes respons på de didaktiske principper. Artiklen afsluttes med diskussion af studiets resultater og implikationer for videnstrekantssamarbejde på erhvervsuddannelses-området.

Videnstrekantssamarbejde set som et didaktisk anliggende

Samarbejdet mellem forskning og praksis får stigende opmærksomhed, både politisk og forskningsmæssigt, og den samfundsmæssige rolle, som forskning spiller i forhold til at løse samtidens presserende problemstillinger, understreges i højere grad end nogensinde (OECD, 2015). I denne sammenhæng vurderes erhvervsuddannelserne til at spille en afgørende rolle i at håndtere samfundets forandringer, arbejdsmarkedets behov for kvalificeret arbejdskraft, sociale inklusion og sammenhængskraft i samfundet (EU, 2020). Studiet, som denne artikel bygger på, er knyttet til Social- og Sundhedsuddannelserne (SOSU), som

siden 2008 har været en dansk erhvervsuddannelse (EUD). Nogle af de samfundsmæssige problemstillinger, som aktualiseres i SOSU, og generelt i erhvervsuddannelsessektoren, handler om manglen på kompetent faglært arbejdskraft, vanskeligheder ved at rekruttere til, samt høje frafald fra såvel uddannelse som arbejde (Mahler et al., 2023). Erhvervsuddannelsernes ringe status er en global bekymring; det påvirker de unges interesse i uddannelsessektoren samt de erhverv, den tjener (Billett, 2014). Udfordringsbilledet er desværre ikke forbeholdt en dansk/nordisk kontekst, men genfindes internationalt (Cedefop, 2016; Schmid et al., 2021). Der ses derfor et øget politisk fokus på de videnstrekanter, der udfoldes i samarbejde mellem forskningsinstitutioner, uddannelsesinstitutioner og offentlige/private virksomheder (European Council, 2009).

Videnstrekantsamarbejde beskrives typisk som en trekant af adskilte parter, der står i relation til hinanden, og det tematiseres, hvordan forskning på *den ene side* indgår i relation med virksomheder på *den anden side* med henblik på at informere praksis med ny viden, som kan overføres til uddannelsesinstitutioner på *den tredje side* (Soriano & Mulatero, 2010). Det politiske opdrag for videnstrekantsamarbejde lægger op til, at viden integreres i praksis, og at en succesfuld integration indebærer, at forskningsbaseret viden overføres og implementeres i praksis. Dette opdrag genfindes i en dansk national udlodning på 20 mio. kr. til forskning, der understøtter erhvervsuddannelsernes kvalitet, attraktionsniveau og fastholdelsesevne (Danmarks Frie Forskningsfond, 2023). I opslaget fremhæves, at forskning kan ske "i samarbejde med og med omsætning i relevante uddannelser – og hermed understøtte, at skoler og virksomheder giver eleverne den bedst mulige uddannelse" (Danmarks Frie Forskningsfond, 2023, s. 6). Opslaget afspejler et fokus i videnstrekantsamarbejde på at sikre kvaliteten af erhvervsuddannelserne ved at forskning kommer skoler og virksomheder til gavn, så uddannelses- og praksismiljøer forbedres.

Som en del af argumentationen for denne artikels relevans fremhæver vi to udfordringer, der beskrives i den eksisterende litteratur om videnstrekantsamarbejde: For det første problematiseres det, at videnstrekanter hovedsageligt beskrives på et intentionelt makroniveau (fx Soriano & Mulatero, 2010), hvormed oversættelsen til konkrete praksisser for forsker-praktiker-samarbejde overlades til de involverede (Sjoer et al., 2013). Det betyder, at der mangler konkrete undersøgelser af, hvilke former for forsker-praktiker-samarbejde en videnstrekant indebærer, og hvordan samarbejdet kan se ud i "re-al-life cases" (Sjoer et al., 2013, s. 58). Etableringen og tilrettelæggelsen af videnstrekantsamarbejde kan siges at være en *black box* uden praktiske eksemplificeringer.

For det andet beskrives videnstrekantsamarbejde typisk som lineære processer, hvor forskningens opdrag er at informere praksis. Forventningen er,

at viden fra forskning kan fremme innovative uddannelsesdesign og service (Soriano & Mulatero, 2010). Forsker-praktiker-samarbejde forventes at skabe *spill-overs* (Maximilian et al., 2020) i form af viden, der kan overføres fra forskning til praksis, afhængigt af modtagerorganisationens *absorptive capacity* (Mavroeidis & Tarnawska, 2017). Andre studier af forskningsimpact antager en tidsmæssig sekvensering i faser, hvor teoretiske indsigter kommer først (under feltarbejde, analyse og skrivning) og hvor en opdeling mellem academia og praksis overvindes ved at oversætte indsigt til praksis (Kelemen & Hamilton, 2018).

Overførselsmetaforen for videnstrekantssamarbejde kan genfindes flere steder på erhvervsuddannelsesområdet, blandt andet i den danske Uddannelses- og Forskningsstyrelses kortlægning af EUD-forskning, hvori der står, at: "der er behov for mere systematisk styrkelse af dette samarbejde og *overførsel af viden fra forskningen* til erhvervsskoler og lærepladser" (Uddannelses- og Forskningsstyrelsen, 2023, vores kursivering). Opdraget til erhvervsuddannelsesforskning om *overførsel af viden* kan betragtes som en privilegering af forskningsviden over andre vidensformer, og vi ser dette som en tilgang, der fremskriver *an epistemology of possession* (Cook & Brown, 1999). *An epistemology of possession* betyder, at viden opfattes som noget, der produceres og ejes af forskning og forskere, og som kan overføres til og tilegnes af praksis. Denne artikel udspringer af et ønske om at tilbyde en alternativ demokratiserende tilgang til videnskabelse i videnstrekantssamarbejde, for derved at gøre op med en forståelse af viden, som noget, der produceres og ejes af forskning.

Retter vi blikket mod artiklens specifikke erhvervsuddannelseskontekst (SOSU) fremstår forsker-praktiker-samarbejdet relativt uudforsket, ligesom området beskrives som forskningsuvariant (Møller et al., 2021). Forskning beskrives som en teoretiseringsdisciplin, der opleves abstrakt og afkoblet fra daglig praksis, og hvor praksis overlades til selv at omsætte den viden, som forskning producerer (Bøje et al., 2015; Møller et al., 2021; Rohwedder & Thomassen, 2022). At videnstrekantssamarbejde ofte kan knyttes til *an epistemology of possession*, hvor forskningsviden privilegeres og forstås som lineær vidensoverførsel, synes altså for nuværende at være den dominerende tænkning om forsknings-samarbejde på SOSU-uddannelsesområdet.

I forskning på EUD-området er der bevågenhed på at undersøge og kvalificere samarbejdet mellem to af videnstrekantens sider; *skoler* og *virksomheder* (fx Aakernes, 2018; Gessler, 2017; Louw, 2017; Mårtensson, 2021). Herunder understreges nødvendigheden af at indgå i *social partnerships* omkring innovativ udvikling af attraktive uddannelser (Billett & Seddon, 2004). Vi har fundet studier, hvor partcipatoriske forskningstilgange som aktionsforskning og læringscirkler anvendes i samarbejder mellem skoler og forskning for at skabe fælles udvikling og læring (fx Borchmann, 2013; Hersom & Sørensen, 2019;

Rohwedder, 2021). Herunder argumenterer et studie baseret på interaktiv forskning (Burchert et al., 2014) for, at videnskabelse må ske gennem ligeværdig udvikling (*egalitarian co-development*) mellem forskere og praktikere og studiet søger at afsløre underliggende designprincipper for hybride læringsmiljøer mellem skoler og praksis (Burchert et al., 2014). Studiet af Burchert et al. peger dog ikke på, hvilke principper for interaktiv forskning, der kan facilitere ligeværdig vidensudvikling, hvor forskning ikke privilegeres som vidensudvikler.

Nærværende studie adskiller sig fra de oplyste studier på to måder: For det første inkluderer studiet *alle tre sider* af videnstrekanten (skole, virksomhed og forskning), for det andet er *selve* forskningssamarbejdet og tilrettelæggelsen heraf studiets genstandsfelt. Intentionen med artiklen er at etablere et nyt sprog for og tilgang til videnstrekantssamarbejde som et ligeværdigt viden- og læringsrum. Vores argument er, at praktisering af sådant samarbejde kræver didaktisk bevågenhed. Det har ledt os til følgende forskningsspørgsmål:

- Hvilke (u)muligheder åbner sig, når et forsker-praktiker-samarbejde tilrettelægges didaktisk med henblik på at skabe et ligeværdigt videns- og læringsrum?

Artiklens kontekst og metodologi

Artiklen udforsker en *real-life-case* af et videnstrekantssamarbejde på Social- og Sundhedsuddannelsesområdet (herefter SOSU) i Danmark. SOSU-uddannelserne er blandt de største uddannelser inden for danske erhvervsuddannelser (Danmarks Statistik, 2019) og består af to uddannelsesforløb til SOSU-hjælper og SOSU-assistent. I Danmark, ligesom i lande som Tyskland, Schweiz og Østrig, er erhvervsuddannelserne organiseret som vekseluddannelser, hvor eleverne skifter mellem skole- og såkaldte oplæringsperioder i erhvervets praksisfelt. SOSU-elevens oplæringsperioder finder sted i kommuner og regioner, i hjemmeplejen, på plejehjem og hospitaler, hvor der ydes omsorg, pleje og behandling af en stigende gruppe ældre og komplekst syge borgere. Casen fungerer eksemplarisk som et videnstrekantssamarbejde inden for erhvervsuddannelserne og involverer aktører på tværs af forsknings-, uddannelses- og velfærdsinstitutioner, der sammen adresserer væsentlige samfundsmæssige problemstillinger vedrørende kvaliteten i uddannelser og omsorg.

Det nationale forskningscenter, FoCUS, er oprettet med det formål at fremme udviklingen af SOSU-uddannelserne som et forskningsfelt. Centret faciliterer, at der skabes viden gennem samarbejde på tværs af uddannelsesinstitutioner, praksisområder og forskningsmiljøer. FoCUS ledes af forskere, men dets

aktiviteter er forankret i de involverede parterers drivkraft til fortsat udvikling inden for SOSU-området. Med henblik på at etablere og udvikle netværk mellem de tre sider af videnstrekanten arrangerer FoCUS halvårlige forsker-praktiker-netværksmøder. Artiklens *real-life case* tager udgangspunkt i et sådant forsker-praktiker-netværksmøde, tilrettelagt og faciliteret af forskere fra forskningscentret.

Artiklens metodologi er baseret på pragmatismens erkendelsesinteresse, hvor vidensproduktion ikke er en passiv afspejling af en ydre virkelighed, men et resultat af en aktiv og interagerende proces (Dewey, 1929; Elkjaer & Simpson, 2015). Undersøgelsens pragmatiske erkendelsesinteresse giver mulighed for at analysere, hvilke (u)muligheder der åbner sig, når et forsker-praktiker-samarbejde tilrettelægges didaktisk – ikke som en objektiveret sandhed, men som indlejret i en eksperimenterende interaktion med genstandsfeltet (Holm, 2011). Genstandsfeltet er som følge heraf dobbelt, dels undersøges didaktiske principper for et forsker-praktiker-netværksmøde (i første analysedel), dels undersøges, hvad der sker i interaktionen mellem de didaktiske principper og netværksmødets deltagere, når principperne afprøves (anden analysedel).

Undersøgelsens metoder trækker på principper fra *self-studies* (selv-studier), hvor formålet er både at skabe viden om og bidrage til at forbedre den praksis, der undersøges (Bullough & Pinnegar, 2001; Fletcher, 2020). Selvstudiet er karakteriseret ved, at dét, der undersøges, igangsættes og udføres af dem, hvis praksis undersøges (Tidwell et al., 2020; Vanassche & Kelchtermans, 2015). Denne artikel undersøger således et forsker-praktiker-netværksmøde, der er tilrettelagt og faciliteret af artiklens 1. og 2. forfatter og har artiklens 3. forfatter som med-virkende deltager. I tråd med selvstudiet gøres forskernes egne erfaringer til data, som efterfølgende bearbejdes til videnskabelig viden (Bullough & Pinnegar, 2001). To greb har bidraget til at skabe troværdighed og videnskabelig kvalitet: kollaboration og kritisk venskab (Bullock, 2020; Fletcher, 2020). Konkret har tredje forfatter med et udefraperspektiv indtaget rollen som kritisk ven i iagttagelse, analyse og skriveproces ved løbende at stille konstruktive, kritiske og til tider provokerende spørgsmål til "the process of coming to know" (Alan et al., 2021, p. 321). Denne måde kollaborativt at producere og validere data, udfordre antagelser og kontinuerligt tilføje yderligere perspektiver (Schuck & Russel, 2005) fra flere forskellige deltagerpositioner er kernen i studiets bearbejdning af data til viden. Udover kritisk venskab anses kollaboration i selvstudier som afgørende for kvaliteten (Bullock, 2020). I tråd hermed er vores kollaboration foregået på måder, hvor vores forskellige antagelser og perspektiver er bragt i spil, undersøgt og udfordret både tekstligt og dialogisk. Metoden har også bidraget til, at vi som forskere er blevet

klogere, ikke kun på den case, vi undersøger, men tillige på vores måder at tilgå fænomener som forskning, samarbejde og læring.

Artiklens analytiske argumentation består af to dele og afspejler en kronologi i vores undersøgelsesproces. I første undersøgelse af de didaktiske principper i tilrettelæggelsen af forsker-praktiker-netværksmødet trækker vi på Deweys (1929) forståelse af viden og videnskabelse. I artiklens anden undersøgelse af interaktionen mellem de didaktiske principper og deltagernes respons, trækker vi på Wenger-Trayner og Wenger-Trayners (2020) teori om værdiskabelse i det sociale læringsrum. Denne proces afspejler, i tråd med pragmatismen, en abduktiv bevægelse mellem empiriske data og teoretiske perspektiver (Elkjaer & Simpson, 2011).

En generel udfordring ved selvstudier og for dette studie specifikt er at producere data, der kan gøres til genstand for en passende og meningsfuld analyse (Fletcher, 2020). Typisk anvendes dataformer af fortolkende karakter som egne tekstmaterialer, narrativer, logbøger, fotos, tegninger og selv-interview. Data anvendt i artiklens første analysedel består af beskrivelser af de didaktiske principper, som de var tænkt i tilrettelæggelsen af forsker-praktiker-netværksmødet. I artiklens anden analysedel af deltagernes interaktion med didaktiske principper anvender vi data i form af forfatterens logbogsnotater og en tegning. Tegningen er udarbejdet af 3. forfatter som en anonymisering af et foto taget af 1. forfatter. Dette foto, og dermed tegningen, søger at indfange et afgørende øjeblik i interaktionen mellem didaktiske principper og deltagernes respons. Afgørende øjeblikke (*critical incidents*) anvendes i selvstudier som "fractional representations" (Tidwell et al., s. 391) af den praksis, der undersøges.

Inspireret af selvstudie-metoden har visuelle data (brug af fotos og tegninger) fungeret som katalysator for vores kollaborative proces og hjulpet os til at se genstandsfeltet i lyset af flere teoretiske og praktiske perspektiver (Mitchell et al., 2009; Tidwell et al., 2020). Artiklen afspejler på ingen måde de mangfoldige perspektiver, veje og afveje, som forfattergruppen har taget undervejs; ikke alle fremskrives eksplicit, men udvalgte, forstyrrende og bidragende perspektiver inddrages i artiklens diskussion.

Viden og videnskabelse i Deweys optik

Undersøgelsens vidensforståelse er baseret på Deweys greb om videnskabelse som en udforskende social praksis. Vi vil her kort præsentere den grundlæggende tese i Deweys forståelse af videnskabelse, og hvorfor, vi mener, at denne forståelse kan bidrage med en ny tilgang til og sprog for demokratisering af videnstrekantssamarbejde.

Dewey skelner mellem to typer af vidensformer: *A priori viden* og *erfaringsbaseret viden*. *A priori viden* betragtes som en vidensform, der eksisterer forud for

situationer og som er udviklet som foruddefinerede regler for, hvordan verden hænger sammen (Dewey, 1929). Denne type viden indfanges i bøger og procedurer og leveres af eksperter som nøjagtig viden, der kan give stabile svar og vejledning til praksis (Dewey, 1929). Man kan forenklet sige, at denne forståelse af viden dominerer det eksisterende sprog om videnstrekantsamarbejde, hvor forskning forventes at levere viden, der skal informere praksis.

I modsætning til a priori viden beskriver Dewey den erfaringsbaserede viden. Erfaringsbaseret viden skabes, når vi aktivt griber ind i verden og mærker konsekvenserne af vores indgriben (Dewey, 1916, 1929). Erfaringsbaseret viden handler om at konstruere hypoteser snarere end beskrivelser af en objektiveret virkelighed og leverance af ubestridelige svar. Viden – eller erfaringsdannelse – er ikke (udelukkende) individuel men foregår i en konkret social kontekst, hvor teori, begreber, fantasi og ideer alle er nødvendige værktøjer til fælles udforskning af problemer og problemhåndtering (Dewey, 1929).

Man kan altså med Deweys optik betragte viden som enten fast, rationel og forud for enhver situation eller som foranderlig, empirisk og særlig i en bestemt situation (Dewey, 1929). I det følgende afsnit anvendes Deweys forståelse af og tilgang til viden og videnskabelse som teoretisk ramme for analyse af didaktiske principper i tilrettelæggelsen af forsker-praktiker-netværksmødet.

Didaktiske principper i tilrettelæggelsen af forsker-praktiker-netværksmødet

Dette afsnit udgør undersøgelsens første analysedel, hvori vi analyserer de centrale didaktiske principper i tilrettelæggelsen af forsker-praktiker-netværksmødet. Mødet blev afholdt med 41 deltagere, herunder 35 fagfolk, der er involveret i uddannelsesaktiviteter i kommuner, regioner og på SOSU-skoler, samt seks forskere og ph.d.-studerende fra fire danske universiteter. Mødet fandt sted på en SOSU-skole centralt i Danmark og strakte sig over fire timer. Invitationen til mødet blev udsendt via forskningscentrets nyhedsbrev, hjemmeside og sociale medier, og enkelte deltagere, herunder oplægsholdere, blev personligt inviteret.

Netværksmødet analyseres i følgende som et læringsrum, hvor indhold, interaktioner og materialiteter organiseres på måder, der engagerer deltagerne og bidrager til erfaringsdannelse, med henblik på at opløse *an epistemology of possession* (Cook & Brown, 1999), hvor forskningsviden privilegeres. Som afsæt for organisering af læringsrummet betjener analysen sig af en bred forståelse af didaktik som et anliggende, der vedrører mere end formel undervisning, der både involverer tilrettelæggelsen af mulighedsrum for erfaring, og hvordan de deltagende interagerer med det tilrettelagte mulighedsrum (Billett, 2011). I det

følgende analyseres de didaktiske principper i lyset af Deweys greb om viden og videnskabelse som proces og resultat af en fælles udforskende praksis (Dewey, 1916, 1929, 1938).

Indhold som stimulerende for erfaringsdannelse

Mødet var tilrettelagt med overskriften *Arenaer for lærende samarbejde* som et tværgående indholdsfokus for mødets tre korte oplæg og to runder af drøftelser. Overskriften skulle rammesætte og stimulere deltagernes erfaringer (Dewey, 1916) med forskellige typer af samarbejder og fokusere opmærksomheden på betydningen af at se samarbejde i et læringsperspektiv. Netværksmødets tre korte oplæg blev givet fra forskellige erfaringspositioner (Dewey, 1929).

En forsker indledte med et oplæg om sin forskning om "tvivl som afsæt for lærende samarbejde". Det didaktiske princip for faciliteringen af dette oplæg var, at teorier og begreber kan fungere som redskaber til at pege på mulige problemstillinger og løsninger og dermed virke faciliterende på drøftelser og erfaringsdannelse (Dewey, 1916, 1929). To kommunale konsulenter gav oplæg om deres arbejde med "ledelse af læring i ældreplejen". Det didaktiske princip for dette oplæg var at konkretisere det lærende samarbejde og give opmærksomhed på muligheder og udfordringer, når lærende samarbejde søges praktiseret i en kommunal praksis. Det tredje oplæg, givet af en forsker, zoomede ind på forsker-praktiker-samarbejdet som gensidigt lærende. Det didaktiske princip var at involvere deltagerne i en idéudvikling i relation til forskerens *work-in-progress*.

Interaktioner på tværs som fremmede for problembaseret udforskning

Netværksmødets deltagere var planlagt placeret sådan, at der ved alle borde var repræsentanter fra de forskellige sektorer inden for videnstrekanten. Det didaktiske princip var at fremme interaktioner på tværs af erfaringer, positioner og ekspertise med henblik på at understøtte en problembaseret udforskning (Dewey, 1916, 1929). Der var tilrettelagt to runder af drøftelser ved bordene (à 40 minutter) organiseret ud fra følgende problemstillinger: "Hvordan kan vi ledelses- og uddannelsesmæssigt medvirke til at afprivatisere tvivl i arbejdet?", "Hvilke arenaer for lærende samarbejde har vi adgang til - og behov for at etablere?" og "Hvordan kan forskningsprojekter etableres, så alle deltagere lærer noget?". Det problemorienterede fokus i de rammesættende spørgsmål var tilrettelagt for at aktivere deltagernes egne erfaringer og dernæst for at kvalificere fælles udforskende videnskabelse (Dewey, 1916). Intentionen med dette didaktisk princip var at fremme deltagelsesmuligheder, så alle deltagere kunne bidrage som ligeværdige og relevante i fælles videnskabelse.

Materialiteter som fællesskabende

Visuelle præsentationer (slides) blev anvendt til at støtte oplæggenes indhold på en struktureret og visuel måde. Intentionen med dette didaktiske princip var at skabe en fælles opmærksomhed mod de givne temaer og samtidig stimulere deltagerne egne erfaringer (Dewey, 1916). Gruppeborde med bordplan, hvor de forskellige sektorer inden for videnstrekanten var repræsenteret ved hvert bord, skulle understøtte interaktioner og fællesskab på tværs af erfaringer, positioner og ekspertise (Dewey, 1929). Plancher skulle anvendes under drøftelserne til at generere fælles opmærksomhed på den problembaserede udforskning af det lærende samarbejde.

Når plan møder virkelighed

I tråd med Dewey (1938) organiserer de didaktiske principper en styret proces, hvor deltagerne ikke overlades til selv at afgøre, hvilke former for indhold, interaktioner og materialiteter, der kan muliggøre et ligeværdigt lærings- og vidensrum. Dette indebærer, for de faciliterende forskere, en "intelligent form for planlægning", der er "fast nok" til at styre læreprocessen og "fleksibel nok" til at imødekomme deltagerne respons (Dewey, 1938, s. 68). En vigtig pointe er, i tråd med Deweys tænkning (1938), at netværksmødet er tilrettelagt didaktisk på baggrund af en forestilling om princippernes virkning, men at princippernes (u)muligheder for at skabe et ligeværdigt lærings- og vidensrum må erfares i praksis. Dette leder til følgende analyse af, hvad der skete i interaktionen mellem principper og deltagere.

Deltagerne interaktioner med didaktiske principper

Spørgsmålet, der behandles i denne analysedel er, hvordan de didaktiske principper virkede i praksis, ikke som lineær effekt, men som en responsiv praksis i interaktion mellem deltagere og didaktiske principper.

I et forsøg på at indfange (u)muligheder, gjorde vi på dagen notater, tegnede og tog fotos, når vi fik øje på noget, der kunne sige noget om interaktionen mellem deltagerne og de didaktiske principper. Med reference til den metodiske beskrivelse af selvstudiet, anvendes nedenstående tegning som en visuel repræsentation (Mitchell et al., 2009), fremstillende et afgørende og eksemplarisk øjeblik (Tidwell et al., 2020). Situationen vurderes afgørende og eksemplarisk for den måde, hvorpå deltagerne valgte at interagere med de didaktiske principper og med hinanden (Billett, 2011), som vi (forfattere/tilrettelæggere/deltagere på dagen) erfarede det (Fletcher, 2020; Parker et al., 2016). Tegningen viser en gruppe af deltagere (fra alle tre sider af videnstrekanten) omkring et gruppebord. Gruppen er i gang med at udforske et af de problembaserede spørgsmål til

dagens oplæg. I analysen suppleres tegningen med noter fra forfatterens logbøger fra dagen.



Figur 1. Grafisk fremstilling af deltageres interaktion med didaktiske principper.

Tegningen er desuden udvalgt til analytisk fremstilling, fordi netop denne tegning og de analytiske drøftelser tegningen afstedkom i forfatterens ledte os til teorien om det sociale læringsrum (Wenger-Trayner & Wenger-Trayner, 2020) som et begrebsapparat til at forstå, hvilke (u)muligheder, der åbner sig i interaktionerne mellem deltagere og didaktiske principper.

Det sociale læringsrum

Et socialt læringsrum kommer til live gennem deltagelse og engagement og er noget deltagere skaber sammen i en social kontekst, hvor interaktioner struktureres og aktiveres med henblik på at engagere sig i videnskabelige processer (Wenger-Trayner & Wenger-Trayner, 2020). Et socialt læringsrum kan

i følge Wenger-Trayner og Wenger-Trayner opstå, hvis deltagelsen er karakteriseret ved:

- *Fælles omsorg for at gøre en forskel*, forstået som et fælles ønske om sammen at håndtere problematikker, der opleves betydningsfulde og presserende.
- *Engageret usikkerhed*, beskrevet som deltagelse, hvor tvivl og det vi endnu ikke ved udtrykkes, adresseres og udforskes i fællesskab.

Opmærksom tilstedeværelse, hvilket indebærer nysgerrig og opmærksom deltagelse, at man lægger mærke til, hvad der sker, og hvordan egne og andres antagelser og perspektiver har indflydelse på rummet Et socialt læringsrum involverer desuden et refleksivt forhold til såkaldt etableret viden, altså den type viden Dewey beskriver som *a priori*. For Wenger-Trayner og Wenger-Trayner betyder det, at viden anvendes i det sociale læringsrum som input til refleksion og ikke som fakta. Det handler om at lære, hvad der endnu ikke vides – og ikke om at overføre, hvad der allerede vides. På den måde læner Wenger-Trayner og Wenger-Trayners forståelse af det sociale læringsrum sig op af Deweys tilgang til videnskabelse som en udforskende social praksis. Vores abduktive hypotese er, at de didaktiske principper kan muliggøre en aktivering af et socialt læringsrum, hvor forskningens *epistemology of possession* kan ophæves til fordel for fælles udforskning og videnskabelse.

I det følgende analyseres deltageres interaktioner med de didaktiske principper tematiseret med afsæt i ovenstående karakteristika ved det sociale læringsrum. Det skal pointeres, at der er tale om en analytisk konstruktion, da det sociale læringsrums karakteristika er internt forbundne og derfor vanskelige at adskille empirisk.

Fælles omsorg for at gøre en forskel

Fælles omsorg for at gøre en forskel og skabe værdi for noget, man har fælles omsorg for, er central for aktivering af et socialt læringsrum. Kontekster, hvor læring er overfladisk og hvor det handler om at tilegne sig en bestemt viden, vil ikke aktivere et socialt læringsrum (Wenger-Trayner & Wenger-Trayner, 2020). Vi finder tegn på, at netværksmødets deltagere interagerer med de didaktiske principper med fælles omsorg. Et eksempel fremgår af nedenstående logbogsnotat:

Der er nu pause i programmet. Den intense summen fra gruppedrøftelserne fortsætter. Folk slipper ikke snakken. Nogen rejser sig, men jeg ser ikke nogen, der åbner deres computer eller telefon. Jeg hører dog én, der siger ”nej, jeg skal altså lige nå at få en kop kaffe”, men hun bliver stående med front mod sin samtalepartner. Ingen andre dagsordner synes at presse sig på. (logbog, 1. forfatter)

At deltagerne forbliver i drøftelser og end ikke har tid til kaffe, ser vi som et udtryk for, at de er engagerede i problemstillinger, som de oplever som betydningsfulde og presserende. Dette kan være et tegn på, at de drager fælles omsorg for at gøre en forskel for SOSU-feltet. I tegningen (Figur 1) ser vi, at deltagerens engagement træder frem i deres interaktion med planchen som fælleskabende materialitet. Gruppebordet med planchen i midten ser ud til at muliggøre en fælles opmærksomhed, engagement og omsorg. Denne omsorg er, i tråd med Wenger-Trayner og Wenger-Trayner (2020), ikke noget som siges højt i situationen, men fremkommer mere som en samstemmende tavs ambition, der kan siges at vokse frem i interaktionen mellem deltagere og didaktiske principper.

Et kritisk perspektiv på ovenstående analyse af de didaktiske princippers virkning kan påpege, at deltagerne sandsynligvis har tilmeldt sig netværksmødet, fordi de har særlig interesse for SOSU-uddannelsesfeltet. Derfor kan de tegn, vi finder på, at deltagerne agerer med fælles omsorg, lige såvel afspejle deres motivation for deltagelse mere end virkningen af de didaktiske principper. Uanset de virkende årsager vil *fælles omsorg for at gøre en forskel* åbne mulighed for, at forsker-praktiker-netværksmødet tager form som et ligeværdigt videns- og læringsrum.

Engageret usikkerhed

I deltagerens fælles bestræbelser på at gøre en forskel for SOSU-feltet åbnes mulighed for, at de adresserer og udforsker usikkerhed og tvivl om, hvordan presserende problematikker kan forstås og håndteres. Engageret usikkerhed kan, ifølge Wenger-Trayner og Wenger Trayner (2020), beskytte imod simplificeringer, forudgående antagelser og bias. I et dagens oplæg beskrives SOSU-uddannelsesfeltet som en mudret affære med et væld af komplekse problemstillinger. Oplægsholderen viste blandt andet et billede af personer, der roder rundt i et mudderbad. På et tidspunkt udbrød én af deltagerne "We are in this shit together" (logbog, 2. forfatter). At netop dette bliver sagt højt af en af deltagerne er, for os, et afgørende øjeblik (Tidwell et al., 2020), idet flere deltagere kobler sig på og gentager udsagnet. Som noteret: "det er som om der opstår en fælles stemning eller følelse af samhørighed i rummet" (logbog, 2. forfatter). Vi ser her tegn på, at det didaktiske indhold åbner mulighed for at skabe en fælles forståelse af, at man gerne må være i tvivl, og at mulige svar skal findes gennem fælles udforskning. Med reference til Wenger-Trayner og Wenger-Trayner (2020) kan man sige, at engageret usikkerhed muliggjorde erkendelsen af at være "in this shit together" og hjalp deltagerne til ikke at lede efter eksakte svar. Vi har en antagelse om, at den fælles oplevelse af at rode rundt i mudderet sammen bidrager til, at deltagerne engagerer sig i fælles udforskning

på en måde, hvor alle stemmer, erfaringer og positioner er ligeværdige. Om deltagerne interaktioner med de problemorienterede spørgsmåls, noterede 3. forfatter sig følgende:

Jeg lytter til, hvad deltagerne taler om, og hvordan de gør det. I modsætning til, hvad jeg tit har oplevet i tilsvarende sammenhænge, taler de sammen på andre måder. Jeg finder ikke, at de taler om svarene på de problemstillinger, som de rejser. Jeg oplever til gengæld, at de stiller flere spørgsmål og tager kritisk stilling til det, de oplever omkring problemstillingerne. De er ved at finde ud af noget her... (logbog, 3. forfatter)

Logbogsnoten peger på, at deltagerne interagerer med hinanden og de didaktiske principper ved at stille spørgsmål fremfor at komme med svar. Dette kan være tegn på, at drøftelserne sker med afsæt i delt usikkerhed og på kanten af, hvad deltagerne allerede ved. Det er netop, ifølge Wenger-Trayner og Wenger-Trayner (2020), afgørende for aktiveringen af et socialt læringsrum, at interaktioner tager afsæt i deltagerne erfarde usikkerheder, og ikke i det, deltagerne allerede (tror de) ved om problemstillingen. Et kritisk perspektiv på, hvorvidt de didaktiske principper åbner for mulighed for at deltagerne kunne engagere sig med usikkerhed, kan læses i nedenstående logbogsnotat.

Under et oplæg vises en slide med et billede af nogle ænder og teksten "The ugly duckling". Jeg får en stærk fornemmelse af, at dette er betydningsfuldt for netværket som fællesskab, men det undrer mig, at ingen spørger ind til eller udfordrer det. Er SOSU uddannelsesverdenens grimme ælling? Hvorfor tager alle deltagerne ukritisk eller uimodsagt den fortælling for gode varer? Er det en sandhed, som ingen sætter spørgsmålstegn ved? (logbog, 3. forfatter)

Dette logbogsnotat peger på, at forskeren oplevede en usikkerhed, som forblev tavs, og som først blev adresseret i forbindelse med artiklens udarbejdelse. Da kvaliteten af det sociale læringsrum afhænger af, hvorvidt usikkerhed adresseres, vil det være afgørende for de muligheder, som tilrettelæggelsen åbner for, at alle (også forskerne) deler, hvad de oplever som usikkerheder. I dette tilfælde kunne forskeren sætte sin oplevede usikkerhed omkring deltagerne samstemmende accept af SOSU-feltet som "the ugly duckling" i spil som en kritisk ven, der kunne udfordre denne selvfølgelighed (Wenger-Trayner & Wenger-Trayner, 2020). Der hviler måske en særlig forpligtelse for forskerne i at engagere sig med delt usikkerhed og omsorg for feltet, hvis tilrettelæggelsen af forsker-praktiker-samarbejdet skal muliggøre et ligeværdigt lærings- og vidensrum.

Opmærksom tilstedeværelse

Den tredje driver for aktivering af det sociale læringsrum er deltagerens opmærksomhed. Vel at mærke en omhyggelig, koncentreret og engageret opmærksomhed på det, deltagerne har for sammen, hvor deltagerne ikke

responderer for hurtigt, men lader perspektiver udfolde sig (Wenger-Trayner & Wenger-Trayner, 2020). Opmærksom tilstedeværelse kommer ikke kun til udtryk som verbale tilkendegivelser, men også som kropslige respons og følelsesmæssige reaktioner på oplevelsen af rummet (Wenger-Trayner & Wenger-Trayner, 2020). I tegningen (Figur 1) ser vi, som eksempel på deltageres opmærksomme tilstedeværelse, at de er kropsligt rettet mod hinanden og mod planchen på bordet. Deltageres måde at vende sig imod hinanden, med kroppene lænet ind over planchen og blikke, der følger papiret og den som taler, kan være tegn på, at de er kropsligt responsive på hinanden og opmærksomme på det fælles. Vi ser altså tegn på, at deltagerne responderer kropsligt på de didaktiske principper for organisering af interaktioner på tværs og fællesskabende materialiteter med omhyggelig opmærksomhed. Dette muliggør, at de kan imødekomme hinanden og etablere en fælles omsorg. Denne betragtning underbygges af følgende logbogsnotat:

Jeg ser, at deltagerne kontakter hinanden på tværs af de organisationer, de kommer fra. Det virker ikke til, at de kender hinanden forvejen. Men de fremstår åbne overfor hinanden og spørger nysgerrigt ind til hinandens oplevelser. Jeg får en oplevelse af, at problemstillingerne, som de taler om, skaber forbindelser mellem dem. Det virker næsten som om de overraskes over ikke at være alene om at opleve det, der kommer på banen. (logbog, 2. forfatter)

Ovenstående notat indikerer, at deltagerne interagerer med det didaktiske princip om problembaseret udforskning, hvilket ser ud til at virke fællesskabende ved at muliggøre forbindelser imellem dem. Det didaktiske princip om, at der skal være repræsentanter fra alle videnstrekantens sider omkring bordene, muliggør, at deltagerne kan interagere med hinanden på kryds og tværs af trekantens sider. Logbogsnotatet peger på, at deltagerne forholder sig nysgerrigt og opmærksomt på hinanden, hvilket bidrager til at aktivere et socialt læringsrum (Wenger-Trayner & Wenger-Trayner, 2020), hvor deltagerne kan undersøge og udfordre hinandens erfaringer på måder, der privilegerer erfaringsbaseret viden. Dette kan muliggøre, at de deltagende forskere ikke positioneres eller positionerer sig som eksperter og ejere af viden, som skal overføres til de øvrige deltagere. Det problematiske (umulige?) i dette er, at det ligeværdige lærings- og vidensrum kræver kontinuerlig opmærksom tilstedeværelse, hvor deltagerne aktivt forholder sig til, hvordan forskellige positioneringer og privilegier påvirker læringsrummet (Wenger-Trayner & Wenger-Trayner, 2020).

"Framing" fremfor planlægning

Som kritik af intentionen om at tilrettelægge med henblik på at skabe et ligeværdigt lærings- og vidensrum, ville Wenger-Trayner og Wenger-Trayner formentlig sige, at et socialt læringsrum opstår i deltageres respons med deres

forståelse af *læringsagendaen*, og ikke som respons på didaktiske principper i sig selv (løsrevet fra læringsagendaen). Derfor bruger de begrebet "framing" fremfor planlægning (2020, s. 151). Aktivering af det sociale læringsrum er netop ikke noget, man kan forudbestemme skridt for skridt, men noget, der skabes i situationen mellem deltagerne. "Framing" og ikke mindst "re-framing" beskrives som en dialogisk respons i det, der sker i rummet, styret af læringsagendaen, det vil sige spørgsmål om, hvorfor vi er her, hvad det er for en forskel, vi ønsker at skabe, og hvordan vi kan hjælpe hinanden (Wenger-Trayner & Wenger-Trayner, 2020). At sociale læringsrum ikke kan planlægges forud, peger på det potentielt umulige (eller i det mindste, problematiske) i at ville tilrettelægge et forsker-praktiker-samarbejde som et ligeværdigt lærings- og vidensrum.

Diskussion

Formålet med denne artikel er at undersøge og skabe dialog om de (u)muligheder, der åbner sig, når et forsker-praktiker-samarbejde inden for erhvervsuddannelsesfeltet tilrettelægges med henblik på at skabe rum for videnskabelse på en ligeværdig og gensidig lærende måde. I selvstudier, som dette, er fokus at skabe viden om og bidrage til at forbedre egen praksis (Bullough & Pinnegar, 2001; Fletcher, 2020). Vi må derfor nødvendigvis stille os selv spørgsmålet om, hvilken viden dette studie kan siges at producere, om denne viden er interessant for andre end os selv, og mere kritisk, om vi i begejstring for vores eget projekt taber videnskabelig kvalitet.

Svarene på disse spørgsmål må afspejle undersøgelsens pragmatiske erkendelsesinteresse, idet viden i denne sammenhæng betragtes som erfaringer, der vil ændre sig i takt med, at vi får nye erfaringer med at praktisere videnstrekantssamarbejde. Med dette inviterer artiklen læseren ind i praktiseringen af et forsker-praktiker-samarbejde, som i andre videnstrekantsstudier fremstår udforsket (Sjoer et al., 2016). Svaret på artiklens forskningsspørgsmål må desuden læses i lyset af en ontologisk diskussion af læring som fænomen (som har været kontinuerligt påtrængende i forfattersamarbejdet). For hvad forstår vi ved læring, kan man overhovedet tale om at tilrettelægge for læring, og hvordan kan vi arbejde med at skabe rum for læring, hvis vi ikke forstår læring på samme måde? Alle disse spørgsmål bidrager til at skabe nye erkendelser om de umuligheder, der også åbner sig, når man søger at tilrettelægge et lærende forsker-praktiker-samarbejde. Vi formoder, at artiklens indsigter er interessante for andre, der indgår i forsker-praktiker-samarbejde, ikke som a priori viden, men som indsigter, der kan bruges til at få øje på lignende problemstillinger i andre kontekster og reflektere over mulige løsninger (Dewey, 1916, 1929).

Hvad angår studiets videnskabelige kvalitet, har de to metodiske greb, kollaboration og kritisk venskab (Bullock, 2020; Fletcher, 2020), vist sig afgørende for studiets resultater og har bidraget til at minimere risikoen for at ende med en "glansbillede-analyse" af egen praksis. Studiet har dermed synliggjort egne antagelser og muliggjort nye indsigter, der vil bidrage til at udvikle vores fremtidige praksis for forsker-praktiker-samarbejde (Schuck & Russel, 2005). Vi har fundet metoderne processuelt besværlige og til tider udtrættende, men har også erfaret, at et samarbejde, hvor den kritiske tænkning og stemme ikke lukkes ned, er befordrende for videnskabelse. På den måde har vores (forfatternes) samarbejde aktiveret et socialt læringsrum, hvor engagement i usikkerhed, modsætninger og flertydighed (Wenger-Trayner & Wenger-Trayner, 2020) har været driver for videnskabelse.

Artiklens fund rejser en etisk diskussion af, hvorvidt det praktiserede forsker-praktiker-samarbejde *reelt* kan betragtes som ligeværdigt. I et kritisk tilbageblik kan det problematiseres, at netværksmødet blev tilrettelagt og faciliteret af forskere alene. Trods vores bedste intentioner kan der fortsat være erfaringspositioner, der privilegeres, og deltagere, der, som Wenger-Trayner og Wenger-Trayner (2020) påpeger, marginaliseres, gøres tavse eller censurerer sig selv. Til fremtidige netværksmøder må ligeværdigheden derfor problematiseres, og vi må udforske i fællesskab, hvorvidt og hvordan deltagere fra alle tre sider af videnstrekanten reelt får mulighed for at stille de spørgsmål, som opleves relevante og meningsfulde for dem at undersøge (Wenger-Trayner & Wenger-Trayner, 2020).

En anden etisk diskussion vedrører vores intention om at demokratisere videnskabelse. I dette lys kan det problematiseres, at nærværende analyse af netværksmødet er udført som et selvstudie, der udelukkende inkluderer forskernes perspektiv. Man kan dermed spørge om artiklen, trods sit erklærede formål om det modsatte, faktisk kommer til at reproducere en "epistemology of possession" (Cook & Brown, 1999). Kommer vi som forskere til at fremstå som producenter og ejere af viden, når vi gør os analytiske slutninger om virkninger af de didaktiske principper ved udelukkende at relatere til egne oplevelser af stemninger, reaktioner, kropslige udtryk og verbale udsagn? Muligvis, for på papiret stopper vi analysen her og fortsætter vores forskervirke, hvor disse analyser skal valideres kommunikativt med de implicerede i forsker-praktiker-netværket. Vi (artiklens forfattere) har til gode at udvide kollaboration og kritisk venskab omkring artiklens bidrag med både læserne af denne artikel og deltagerne i FoCUS.

Konklusion

I denne artikel har vi undersøgt, hvilke (u)muligheder der åbner sig, når et forsker-praktiker-samarbejde tilrettelægges didaktisk med henblik på at skabe et ligeværdigt videns- og læringsrum. Spørgsmålet er stillet i en dansk SOSU-kontekst, men repræsenterer en generel problematik indenfor forsker-praktiker-samarbejde på erhvervsuddannelsesområdet.

Med henvisning til Deweys forståelse af viden og videnskabelse præsenteres en række didaktiske principper for tilrettelæggelse af et forsker-praktiker-netværksmøde; *indhold som stimulerende for erfaringsdannelse, interaktioner på tværs som fremmende for problembaseret udforskning og materialiteter som fællesskabende*. Principperne åbner muligheder for at organisere forsker-praktiker-samarbejde som et lærings- og vidensrum for fælles og problembaseret erfaringsdannelse. Det umulige åbner sig i didaktikkens responsivitet, når plan møder virkelighed, hvorfor principperne må erfares gennem deltagerens respons. Vi finder, at deltagerens interaktion eller respons med de didaktiske principper aktiverer sociale læringsrum karakteriseret ved deltagerens *fælles omsorg for at gøre en forskel for SOSU-uddannelserne, engageret usikkerhed og opmærksom tilstedeværelse*. Aktivering af det sociale læringsrum åbner mulighed for at ophæve forskningens *epistemology of possession*, til fordel for fælles udforskning af usikkerhed som afsæt for videnskabelse. Det umulige heri er, at aktivering af sociale læringsrum ikke er noget, man kan tilrettelægge skridt for skridt, men noget, der skabes i situationen mellem deltagerne. Didaktisk tilrettelæggelse af forsker-praktiker-samarbejde med henblik på at skabe ligeværdige videns- og læringsrum er derfor ikke kun et spørgsmål om tilrettelæggelse men også et spørgsmål om *framing* og *re-framing*. Det vil sige en dialogisk respons på læringsagendaen; hvorfor er vi her, hvilken forskel ønsker vi at gøre og hvordan kan vi hjælpe hinanden til dette.

Artiklens konklusion skal læses i erkendelsen af, at tilrettelæggelse af et forsker-praktiker-samarbejde, der skaber rum for videnskabelse på en ligeværdig og gensidig lærende måde, kræver, at man stopper op, revurderer, tilpasser, er i dialog og er åbne for, at det kan være besværligt og utrygt at blive konfronteret med det, man ikke ved og ikke forstår. I "Wenger-Traynersk" forstand må vi engagere os i usikkerheder, "rode rundt i muddret sammen" og kollaborativt opøve både didaktiske og refleksive færdigheder. Komplexiteten gør, at det ligeværdige forsker-praktiker-samarbejde bliver umuligt endeligt at begribe, forklare eller løse og må nødvendigvis tilgås som værende altid i bevægelse.

Implikationer for fremtidig videnstrekantssamarbejde på erhvervsuddannelsesområdet

Artiklen problematiserer en dominerende tilgang til videnstrekantssamarbejde, hvor overførsel af viden fra forskning til praksis tænkes at kunne bidrage til at løse presserende samfundsproblemer. Vi søger med afsæt i denne problematisering at bidrage med en alternativ demokratiserende tilgang, hvor forsker-praktiker-samarbejde forstås og tilgås som et ligeværdigt videns- og læringsrum. Artiklens bidrag kan danne afsæt for dialog om fremtidig videnstrekantssamarbejde på erhvervsuddannelsesområdet.

Hvis videnstrekantssamarbejde skal muliggøres som et ligeværdigt videns- og læringsrum, må det for det første ske med en anerkendelse af viden som andet end *a priori viden*, der temporalt adskilles fra, overføres til og integreres i praksis (Kelemen & Hamilton, 2018; Maximilian et al., 2020; Soriano & Mulatero, 2010). Viden må anerkendes som erfaringsbaseret, skabt gennem udforskning af presserende problemer. For det andet må videnstrekantssamarbejde ske med en didaktisk bevågenhed på, at parterne får mulighed for at være i interaktion med hinanden og ikke blot stå i relation til hinanden. En sådan forståelse og tilgang til videnstrekantssamarbejde vil formentligt skubbe til forskere og forskningens selvforståelse. Vi (som forskere) må forholde os kritisk reflektivt til, hvordan vi positionerer os, og hvordan vi lader os positionere i forsker-praktiker-samarbejde. Med Wenger-Trayner og Wenger-Trayners begreber må vi forholde os til, hvorvidt vi som forskere indgår i opmærksomme interaktioner. Vi må spørge os selv, hvori vores motivation for videnskabelse er forankret, og om vi oprigtigt er drevet af en omsorg for at gøre en forskel for det felt, vi træder ind i. Dette vil implicere en moralsk forpligtelse på at overskride "the epistemology of possession" (Cook & Brown, 1999), og ikke overlade det til to af trekantens sider at implementere viden. Artiklen afføder en drøftelse i det "akademiske selskab", hvor forskeres rolle som aktive deltagere i forsker-praktiker-samarbejdets sociale læringsrum må anerkendes. Det implicerer, at universiteterne indarbejder nye strukturer og processer, der kan understøtte en anden type samarbejde med omverden (Markkula, 2013). Samtidig kan forskerens deltagelse i sociale læringsrum implicere metoder, der som selvstudiet, skubber til og udvider, hvad man traditionelt betragter som forskning (Bullough & Pinnegar, 2001).

Vi har med undersøgelsens blik på didaktisk tilrettelæggelse af forsker-praktiker-samarbejde som et socialt læringsrum lettet låget til praktiseringens "black box" og dermed lagt lag til en mindre samling af studier, som vægter et lærende forsker-praktiker-samarbejde. Der er dog brug for mere viden om, og flere perspektiver på, hvordan videnstrekantssamarbejde på erhvervsuddannelsesområdet kan praktiseres som et ligeværdigt videns- og læringsrum. Vi opfordrer derfor til flere studier, der med afsæt i *real-life cases* undersøger,

inddrager og imødekommer flere stemmer, tilgange og forståelser af, hvordan forsker-praktiker-samarbejde kan skabe værdi. Videnstrekantssamarbejde synes fortsat relevant at applicere i en erhvervsuddannelseskontekst, fordi *we are in this shit together*, og kun i fællesskab kan vi skabe viden, der kan bidrage til robuste samfundsmæssige løsninger.

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Perspektiver på forskningens mulighed for at bidrage til kvalificering af *teacher agency*: En empirisk analyse fra et projekt i samarbejde mellem erhvervsskoler og en professionshøjskole som forskningsinstitution

Perspectives on how research can contribute to qualification of teacher agency: An empirical analysis base on cooperation between vocational colleges and a university college as a research institution

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Abstract

This article presents perspectives on how research can contribute to the development of teachers' practice. The result shows the benefits of cooperation between colleges and university colleges based on analysis that are inspired by the notion teacher agency. Teacher agency as a theoretical approach can explain teachers' different perspectives and initiatives. The notion draws on the impact of teachers' past, their projective ideas, and the content for their agency such as culture, structures, and material conditions. The notion can help to point out some suggestions for further development. Such development is needed because teachers and pupils experience an increased acceleration that leads to a decrease of well-being. Research can address this decrease and strive to suggest novel solutions.

The results are based on action research from a project initiated and developed in cooperation between three vocational colleges and a university college. The methodology used is observations, logbooks, and resumes from meetings.

Keywords: teacher agency, vocational education, cooperation, action research, well-being, acceleration



Indledning

Selvom de fleste unge trives og har det godt, er der et stigende antal unge i de nordiske lande, der mistrives i uddannelsessystemet (Andersen et al., 2020; Bakken, 2018; Madsen, 2018; Ottosen et al., 2018; Sundhedsstyrelsen, 2018). Dette begrundes artiklens fokus på, hvad lærere gør i deres undervisning samt deres begrundelser herfor, når de forsøger at tage hensyn til og inkludere alle elever, samt hvorledes et samarbejde mellem skole og forskning kan vise nogle af de udfordringer, som kan være ved dette. I artiklen er der tale om erhvervsskoler, og forskningsinstitutionen er en professionshøjskole.

For at forstå muligheder for at agere på ovennævnte udfordringer er der behov for viden, der adresserer de udfordringer, som lærere og skoler står over for i de forskellige uddannelsesmiljøer. Der er altså behov for konkrete eksempler på situationer fra undervisning samt læreres forståelse og ageren herpå, hvorfor vi anvender *agency*-begrebet, som præsenteres nedenfor. Derfor er det relevant, at skoler og forskning samarbejder, idet forskningen kan løfte og systematisere udfordringerne i lyset af teorier. Som artiklen vil vise, er der imidlertid forskel på at analysere udfordringer og så løsninger herpå, for der kan være behov for mere grundlæggende diskussioner om uddannelse og uddannelsesopgaven som forudsætning for løsninger. Forskningsspørgsmålet lyder: Hvorledes kan samarbejde mellem erhvervsskole og professionsforskning kvalificere erhvervsskolelæreres didaktiske valg? Dermed har vi ikke ambition om at definere årsager eller mere generelle forklaringer på udfordringen med manglende trivsel, men vi følger i en dansk kontekst undervisernes perspektiv og problemforståelse samt forskningens muligheder for at kvalificere dette i tiltro til, at det potentielt på sigt kan bidrage til øget trivsel.

Vores formål med denne artikel er at rette opmærksomheden mod proaktive tilgange, der gør det muligt gennem et samarbejde mellem forskere og lærere i forskellige skolemiljøer at konkretisere udfordringer på erhvervsuddannelser, og komme med løsningsforslag til aktuelle udfordringer. For at lette læsningen skriver vi skoler og lærere selvom den konkrete kontekst er erhvervsskoler og -lærere, hvis særkende præciseres gennem artiklen ligesom forskning er varetaget af professionshøjskoler, såkaldt praksisnær forskning, der som udbyder af pædagogisk uddannelse for erhvervsskolelærere har et særligt kendskab til feltet. Når forskere og lærere arbejder sammen, kan de dele indsigter og foretage kontekstnære analyser af muligheder for at fremme trivsel. Vores antagelse er, at forskere og lærere i samarbejde kan pege i retning af mulige initiativer og forandring med henblik på både læreres og elevers trivsel, som er den primære udfordring i vores empiri, fordi ønsket er at øge inklusion af elever på erhvervsuddannelser. Denne artikel vil belyse potentialet i samarbejder, men også diskutere nogle udfordringer.

Teoretisk trækker vi på begrebet *teacher agency* fra et sociokulturelt perspektiv (Priestley et al., 2015b). Teorien antager at lærere påvirkes af strukturelle betingelser på arbejdet og generelt i livet, men at de også kan agere som aktører, der har mulighed for at træffe beslutninger og valg. Dette har en betydning for forskningens muligheder og begrænsninger, da vi på den ene side må forstå deres perspektiv og på den anden side ønsker at understøtte proaktive tilgange både på kort og lang sigt.

Artiklen er bygget op på den måde, at vi indleder med et afsnit om trivsel for især elever, men også lærere i lyset af den øgede acceleration og de mange projekter på erhvervsskoler, som skaber en særlig organisatorisk kontekst. Derefter introducerer vi kort til det danske erhvervsuddannelsessystem. Dette efterfølges af en beskrivelse af det samarbejde mellem skole og forskning, som artiklen handler om. De metodiske valg og implikationer for samarbejdet foldes ud. Derefter følger et afsnit om begrebet *teacher agency*.

Præsentationen af resultaterne viser potentialer i at fokusere på et yderligere samarbejde omkring *teacher agency*, således som det netop er muligt i aktionsforskning. Vores pointe er, at der i et tæt samarbejde mellem forskning og det lokale uddannelsesmiljø kan opnås viden om udfordringer og muligheden for at gennemføre vedvarende ændringer – hvis man vel at mærke ønsker det. Samarbejdet giver en adgang til viden, som er afgørende for indsigter hen imod løsningsforslag. En sådanne forskning kan netop ses som central for professionshøjskoler, som er den institutionelle ramme for vores forskning (Hornskov et al., 2018; Kristensen, 2020). Som Danmarks Forsknings- og Innovationspolitiske råd (2023) konkluderer, så er der et potentiale i professionshøjskoler forskning, fordi de er tæt på praksis, samtidig med at det generelt kan være vanskeligt for praksis at forstå forskning, hvorfor samarbejdet er vigtigt. Indledningsvis ser vi dog først nærmere på problematikken omkring trivsel.

Unges og læreres trivsel

Flere unge får diagnoser, og mange føler sig pressede, ensomme og angst. Mistrivsel rammer bredere end før i tiden som en form for demokratisering af udsathed (Görlich et al., 2019). Problemerne, de unge slås med på deres uddannelsesinstitutioner, kan dog være meget forskellige og har stadig en social slagside (Katznelson et al., 2021). Der tales samtidig også om en ny form for udsathed. Hvor klassisk udsathed relaterer sig til velkendte sociologiske forhold så som forældres indkomst og uddannelse, handler ny udsathed om unges trivsel både socialt og personligt samt risikofaktorer så som psykiske diagnoser og stress.

Forskellige forskningstraditioner fremhæver forskellige forklaringsfaktorer på mistrivsel. Eksempelvis vil den sundhedsfaglige forskning og den psykologiske forskning have en tendens til at sætte fokus på forhold så som søvnmønstre og

overvægt. Den sociologisk orienterede forskning fokuserer i højere grad på strukturelle og kulturelle udviklingstendenser som mulige forklaringsfaktorer på de unges mistrivsel så som en øget præstationskultur i uddannelsessystemet, og en udbredt perfektionskultur i ungdomslivet (Hansen et al., 2019; Låftman et al., 2013; Madsen, 2018; Skaalvik & Federici, 2015).

Ovennævnte problemstillinger er forhold, som en forsker som Rosa (2014) beskriver ud fra begrebet acceleration. Teoretisk forklarer Rosa sådanne udfordringer ud fra sin fortolkning af det aktuelle samfund, hvis strukturer individer handler på, forstår og skaber mening på baggrund af (Rosa, 2022). Han anvender begrebet "dynamisk stabilisering" om det vilkår, at det moderne samfund "hele tiden må vokse, accelerere og være innovativt for at kunne bevare sin struktur" (Rosa, 2022, s. 164). For at dette bliver muligt, må subjekterne have en "motivationsenergi" baseret på "bekymringer, ønsker og ambitioner" (Rosa, 2022, s. 164). Det, som driver subjekterne, er ønsker og angst som følge af de teknologiske og økonomiske muligheder, som findes i "modernitetens eskalationsspil" (Rosa, 2022, s. 179). På makro- og mesoniveau leder dette til aggression og på individniveau til udbrændthed og depression. Fordi moderniteten fremstår som en tidsperiode med mange muligheder, som individerne alligevel ikke kan nå, så opstår oplevelse af mangel på kontrol og fremmedgørelse. For Rosa er et af forslagene til en løsning motivation og handling, hvilket skal finde sted gennem resonans. For individerne vil det sige, "at subjekterne møder hinanden som borgere, der netop i kraft af deres differens har noget at sige hinanden og gerne vil høres og kunne nås, og som ikke opfatter hinanden som konkurrenter eller klienter, der blot udnytter eller lægger hindringer i vejen for hinanden" (Rosa, 2022, s. 230). Rosas teori er en mulig forståelse af og forklaring på, hvorfor ikke kun unge, men også lærere og forskere, som arbejder tæt sammen med ungdomsuddannelser herunder erhvervsuddannelser, oplever mange typer af vanskeligheder og udfordringer, som der er behov for at agere på i en uddannelseskontekst.

Rosa har den pointe, at mennesket i accelerationssamfundet godt nok er frisat fra mange af tidligere tiders fastlåste regler, men også er stærkt begrænset af tidslighedens totalitære magt (Rosa, 2014, s. 12). Vores forhold til verden og til hinanden udfordres af det øgede tempo, øget kompleksitet og særlig i uddannelser træder dette frem i form af flere og flere uigennemskuelige krav om fremdrift og præstationer (Larsen et al., 2020; Sarauw et al., 2016). Katznelson et al. (2022) skelner mellem institutionel acceleration og livsbiografisk acceleration. Denne skelnen kan bidrage til forståelser af, hvordan unge med sidstnævnte acceleration presses yderligere af førstnævnte i mødet med specifikke præstationskrav og -pres på uddannelsesinstitutionerne. Dermed skriver denne læsning også betydningen af uddannelsesinstitutionerne frem. En læsning, som

falder i tråd med forståelsen af, at for institutioner, der oplever acceleration, kan en bedre relation til omverden være løsningen (Hildebrandt, 2023).

Set fra et institutionelt perspektiv tilstræber ungdomsuddannelser at imødegå og agere på udfordringerne, men det opleves ikke nødvendigvis sådan af underviserne. Udfordringerne monitoreres i form af ministerielle krav om indsamling af kvantitative data om så som frafald og gennemførelse, der skal følges op af handleplaner. Sådanne handleplaner kan indeholde hensigter om didaktisk udvikling og dermed relatere sig til projekter, der rammesætter dette. Ifølge ny-institutionel teori er organisationer, som leverer bløde, svært målbare output som uddannelsesinstitutioner, optaget af at legitimere sig selv og fremstå rationelt. For at fremstå rationelt og moderne efterlignes succesfulde organisationer og deres opskrifter for at fremstå seriøse og handlekraftige. Moderne organisationer forsøger at leve op til socialt definerede og sanktionerede normer for, hvordan en rationel og effektiv organisation agerer – på trods af at en række empiriske studier viser, at sådanne opskrifter er ineffektive. I den forbindelse bliver organisationens arbejde for at opnå legitimitet dekoblet fra organisationens daglige drift, og de medarbejdere, som er knyttet til driften (Mik-Meyer & Villadsen, 2007, s. 115–124). Det forstår vi som forhold, der kan øge presset på lærere, og som kan bidrage til følelser af mangel på kontrol og fremmedgørelse i de tilfælde, hvor forsknings- og udviklingsarbejde opleves som dekoblet fra lærernes daglige praksis. Det kan være én af forklaringerne på de udfordringer, som vi gennem artiklen skriver frem, og som samarbejde mellem forskning og skole derfor må forholde sig til. Måske skal løsninger starter et andet sted, sådan som vi foreslår til slut i artiklen.

Institutionerne, sådan som vi kender dem i form af erhvervsuddannelser, har mange samtidige projekter, hvilket stiller store krav om mange, samtidige forandringer. Som forskere oplever vi, at lærere og skoler kæmper med de mange krav til udvikling, herunder nye didaktiske initiativer, der kan imødekomme de unges behov for at øge social inklusion, trivsel og motivation. Politisk tilstræbes også svar, som man kan sætte initiativer i gang på baggrund af (Lesager, 2023). Stærk politisk og organisatorisk styring kan imidlertid bidrage til modstand og mindre konstruktiv adgang til og dialog med skoleledere og lærere (Petersson et al., 2014).

Vi adskiller ikke disse forskellige forståelser og begreber om trivsel, men er optaget af underviseres ageren i de konkrete situationer, som de oplever som udfordrende i deres undervisning, med henblik på at inkludere eleverne. En forudsætning for dette er uddannelseskonteksten og projekter – herunder samarbejde mellem forskning og skoler.

Samarbejde mellem skoler og forskning i lyset af det danske uddannelseserhvervsuddannelser

Erhvervsuddannelser i Danmark er formelt set ungdomsuddannelser, men der går også mange unge voksne og voksne på dem. De unge starter på grundforløb 1 efter afsluttet grundskole, alternativt starter man på grundforløb 2, hvis man er ældre og/eller har anden uddannelse. Efter afsluttet grundforløb påbegyndes hovedforløbet, hvor der veksles mellem at være på skole og i oplæring. Ideelt set er eleven da ansat i oplæringen, men der findes andre muligheder for at fortsætte på hovedforløbet. Uddannelsens fag består af grundfag så som dansk og fag rettet mod de enkelte erhverv. En fagrække, som både indeholder sådanne almene fag og erhvervsrettede fag giver i sig selv en kompleksitet. Samtidig er der mere end 100 forskellige erhvervsuddannelser og flere forskellige måder at organisere og samle disse på erhvervsskoler på (Duch, 2017). Ydermere findes mange forskellige veje til og uddannelsesbaggrunde blandt undervisere, og selv den pædagogiske uddannelse varierer, hvilket får en betydning for identiteten som lærer (Duch, 2016, 2017; Köpsén, 2014). Erhvervsuddannelser har stor politisk bevågenhed grundet prognoser om fremtidig mangel på arbejdskraft, fortsat lav søgning samt frafald på uddannelserne (Aarkrog, 2020).

En undersøgelse viser, at der siden 2016 har været 200 indsatser og i alt er anvendt 500 millioner kr. på projekter med øget søgning og mindre frafald på erhvervsuddannelser som formål, men forskning indgår i begrænset omfang (DEA, 2022). Det konkluderes, at der i projekter ikke er høj prioritering af det sociale miljø og læreruddannelse. En anden undersøgelse viser, at der i 2021 er anvendt 14,8 årsværk på forskning inden for erhvervsuddannelser, hvilket betegnes som lavt (Uddannelses- og Forskningsministeriet, 2023). Det konkluderes også, at der er begrænset finansiering til forskning, og at danske forskningsmiljøerne på området er fragmenterede. Forskningen karakteriseres som spredt ud over mange emner, med 2,4 årsværk relateres til kategorien *uddannelse og efteruddannelse af lærere*. Det er den kategori, som artiklens resultater vil kunne bidrage ind i, og hvor forskningsinstitutionen er en professionshøjskole, som udbyder den pædagogiske læreruddannelse Diplomuddannelse i Erhvervspædagogik, og derfor anvender ny forskning i uddannelses-sammenhænge. Grundet det forskellige fokus og metoder i de to rapporter er det vanskeligt at konkludere yderligere på status på forskning og projekter i samarbejde med skoler, men mange skoler har mange projekter og ansatte, som arbejder professionelt hermed. Fordi der foreligger sparsom med viden om samarbejde mellem forskning og erhvervsskoler, ønsker vi, at artiklen kan bidrage med forslag til en nuanceret tilgang til betydningen af samarbejdet. Vi vil med artiklen komme med et eksempel fra et projekt, hvor der ikke måles kausalt mellem ressourcer og betydning for de elever, fordi uddannelse og trivsel er i fokus, men der vises et potentiale for, at samarbejdet mellem forskning og

uddannelse kan bidrage yderligere til kvalificering af erhvervsuddannelser uden dog at påstå en-til-en implementering, men med mange forskellige processer og betydninger for skoler (Duch, 2023; Røvik, 2007). Derfor følger en detaljeret beskrivelse af projektet bag artiklen samt de valgte metoder og deres implikationer.

Metodiske valg og implikationer for forandring

Projektet anvender en demokratisk tilgang til aktionsforskning, der inspireret af Nielsen og Niensens formidling (2015) ser en forpligtigelse til ud fra en kritisk teoretisk betragtning at bidrage til forandring i en gensidig forpligtigelse mellem teori og praksiserfaringer, men vi ser samtidig en mere pragmatisk tilgang, hvor en offentlig formidling af resultater også er væsentlig, da erkendelsesmæssige og emancipatoriske ambitioner kan være vanskelige at realisere (Launsø et al., 2017). Tilgangen er kvalitativ med henblik på potentialer for praktisk udvikling (Borgnakke, 2017; Denzin, 2020; Flyvbjerg, 2020), ved med afsæt i lærernes forskellige viden om metoder at være transparent og tydelighed omkring valg, begrundelser og refleksioner (Earley, 2013; Kahn, 2015; McLeod, 2009).

Trods projektets tidsmæssige afgrænsning fra foråret 2021 til efteråret 2023, en afgrænsning som ofte er vilkåret for etnografiske studier inden for uddannelsesforskning, så indgår både organisationer samt lærere og elever (Borgnakke, 2004, 2013, 2017). Organisationsperspektivet er centralt i forhold til at leve op til ministerielle krav omkring trivsel, inklusion og fastholdelse, der som omtalt ovenfor monitoreres. Ved at inddrage tre skolars egne perspektiver og prioriteringer sikres en opmærksomhed på konteksten, som bidrager til en særlig mulighed for, at viden kan anvendes til udvikling af praksis (Svensson & Dumas, 2013). Gennem et design med aktionsforskning og løbende dialog mellem forskere og skoler kan forskningens perspektiver løbende i projektperioden bidrage til implementering gennem en opmærksomhed på processer, muligheder og valg for forandringer af viden på skoler (Glosvik, 2017; Røvik, 2007).

Konkret er indledt med dokumentstudier på de tre skoler, der omtales som Vindskolen, Sønderskolen og Nørrevangsskolen (for uddybning af design se Duch, 2023). Dokumenterne viser udfordringer i relation til elevers trivsel med henblik på social inklusion. Dokumenterne er udarbejdet i forbindelse med de ministerielle monitoreringer samt skolars handleplaner og initiativer. Efterfølgende er lærere og elever interviewet i samlet seks fokusgrupper for at opnå en dybere forståelse af problematikkerne (Duch, 2023). Baseret på forskningsanalyser og dialoger med (projekt)ledelse fra skolerne er udvalgt temaer til de tre efterfølgende seminarer med henblik på at give lærerne nye ideer og perspektiver på udviklingstiltag i deres egen praksis. Derefter følger den del

af projektet, som denne artikel baserer sine resultater på, idet lærerne i foråret 2023 har arbejdet med videre udvikling af deres didaktik, som de også har beskrevet i en logbog, hvilket nu uddybes.

Datagrundlaget for artiklen

Som nævnt ovenfor er empirien i artiklen logbøger i form af cases. Disse cases er udarbejdet i løbet af foråret 2023 og drøftet på to sparringsmøder. Logbogen indeholder en skabelon for, hvorledes man løbende kan arbejde med at beskrive og reflektere over relevante situationer og erfaringer fra den didaktiske praksis på erhvervsskoler, det kalder vi cases. Hver lærer er opfordret til at skrive mindst fire cases. I alt er der 15 cases fra Vindskolens fire lærere, 12 fra Sønderskolens tre lærere og fem fra Nørrevangsskolens fire deltagende lærere (Duch & Thostrup, 2023). Mange beskrivelser er korte, og vi ser det som udtryk for det pres, lærerne har oplevet ved at medvirke i projektet og løse deres øvrige opgaver. Et pres, de løbende har givet udtryk for, samtidig med at nogle har tematiseret, at skriftlig formidling er vanskelig for dem. Efter, hver af lærerne (ideelt set) har udarbejdet to cases, er afholdt et online-møde med forsker med henblik på sparring og forslag til videre arbejde. Lærerne har derefter arbejdet videre og haft til opgave at udarbejde yderligere to cases frem til det andet sparringsmøde. Metodisk er cases således flettet ind i projektet med henblik på at dokumentere og evaluere bagudrettet og kvalificere fremadrettet (Boolsen & Weissert, 2020). Casene giver et indblik i praksis set fra lærerens perspektiv, og de er drøftet og anvendt til fremadrettede beslutninger i projektets styregruppe som en del af den demokratiske tilgang i aktionsforskningen (Duus et al., 2012). Konkret har dette betydet, at deltagerne er opfordret til i cases udarbejdet efter første sparringsmøde at *agere* på udfordringer i undervisningen frem for især at fokusere på vilkår og forhold, som de ikke mener at have indflydelse på eller mulighed for at ændre. Forskningsrollen har således været at systematisere det samlede materiale og at udfordre underviserne i deres forståelse af muligheder og indflydelse.

I forbindelse med det fysiske, andet sparringsmøde på hver skole er en af lærernes undervisning observeret. Observationen har taget afsæt i de fokuspunkter, som netop denne lærer har valgt i sammenhæng til en af casene samt til projektets tema. I dette tilfælde har altså den enkelte lærers valg været afgørende for det videre forløb og resultater i projektet. Der er taget observationsnoter fra observationerne samt referater fra sparringsmøderne. På Vindskolen varende observationen to timer og på de to andre skoler halvanden time (Duch & Thostrup, 2023).

Som forskere har vi derefter læst og analyseret de i alt 32 cases, som på forskellig vis handler om social inklusion med henblik på at opnå mindre ulighed i undervisning. Udgangspunktet har først været induktivt, da casene er

gennemlæst og drøftet blandt artiklens forfattere flere gange i forhold til kategoriseringer (Kvale & Brinkmann, 2009). I første omgang med henblik på indholdet i casene. De fleste, 23, handler om enkeltelever, og de afspejler således en lærerforståelse af, at udfordringer for undervisning skyldes elevgruppen, og at der er behov for særlig indsats rettet mod den enkelte. Alene ni cases tematiserer mere generelle didaktiske problemstillinger på hold. I anden gennemlæsning er kategoriseret i forhold til, at lærerne reflekterer og agerer, altså en teoristyret kategorisering på baggrund af artiklens teoretiske begreb *agency*, og især hvorledes de agerer i nutiden gennem didaktiske tiltag – se uddybning nedenfor. Det findes i de ni cases med et mere generelt indhold og en af de 23 med fokus på enkelte elever. I 22 af disse cases fremstår udfordringerne i undervisningen primært som et vilkår, hvor undervisere vanskeligt kan agere herpå ud over at involvere andre professionelle, som kan løse individuelle problemstillinger hos elever – ofte uden for holdets undervisning. Disse cases giver således ikke indblik i, hvorledes lærere udviser *agency* i deres didaktiske praksis, og problemforståelsen knytter sig til enkelte elevs inklusion som nærmest en umulig opgave. Disse cases udtrykker en form for resignation over for opgaven som lærer, hvilket kan forstås i lyset af *acceleration*, og derfor vælger vi ikke i artiklen at gå nærmere ind i disse, men at fokusere analysen på den formulerede *agency* i cases med henblik på forskningens muligheder for at fremme dette. Vi forstår det som et tiltag med henblik på resonans og i lyset af, hvad vi som forskere ønsker at fremme. Dette valg frembringer resultater og perspektiver, som vi som forskere i lyset af aktionsforskning som metode har mulighed for at drøfte med skolerne og efterfølgende har formidlet, ligesom det undervejs i projektet er drøftet, at deltagerne har vanskeligt ved at finde tid til at arbejde med projektet. Lærerne gør gennem projektet det mest nødvendige – så som at skrive cases og møde frem til aftaler – men finder det vanskeligt at fordybe sig og udvikle nye tiltag ud over dette (jf. *acceleration*).

Casene, som giver et indblik i *agency*, finder vi hos fem undervisere, fordelt med tre hos en lærer, to hos tre lærere og en hos en lærer. Blandt disse knytter to direkte an til to af de tre observationer af undervisning i projektet. Derfor vil den følgende præsentation af resultater især fokusere på de to lærere, som er observeret. Den ene af disse er Mikkel, som er ansat på Sønderskolen, har mere end 20 års undervisningserfaring og er i 60erne. Den anden er Lene, som er ansat på Vindskolen, har mindre end fem års undervisningserfaring og er i 30erne. Begge har de en videregående uddannelse som baggrund for deres ansættelse på en erhvervsskole. Lene underviser i grundfag, Mikkel i fag relateret til handel. Lenes pædagogiske uddannelse er det gymnasiale pædagogikum, Mikkels noget ældre pædagogiske uddannelse var målrettet erhvervsskolelærere. Førstnævnte viser betydningen af en undervisers fortid, sidstnævnte nogle mere aktuelle normative overvejelser, der i begge tilfælde får betydning for *teacher agency*. De

øvrige cases præsenteres indledningsvis i afsnittet om resultater, men først introduceres det teoretiske begrebet *teacher agency*.

Teacher agency som teoretisk begreb

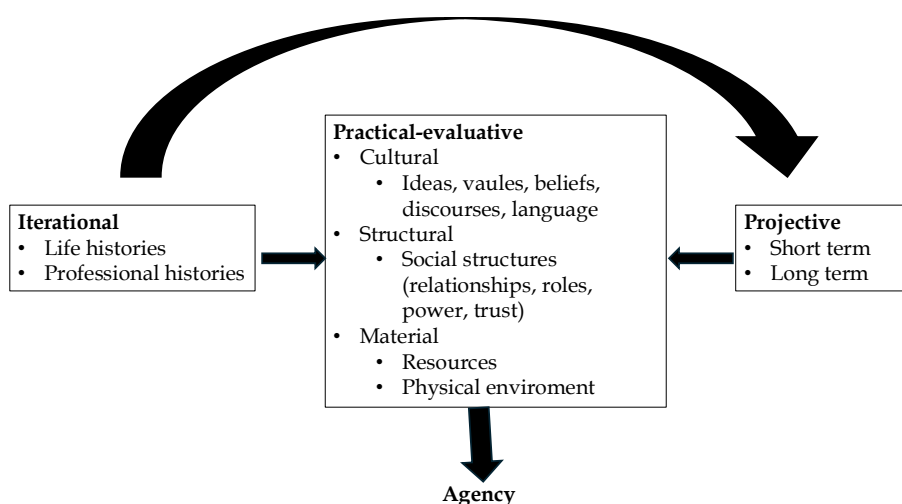
I samarbejde mellem skole og forskning er det relevant at tematisere lærernes kapacitet, betingelser og muligheder for at skabe udvikling og løse didaktiske problemer i undervisningen, fordi skole kan udvikle på disse betingelser, og forskningen kan bidrage med analyser af den aktuelle situation og forskningsinformerede forslag til videre udvikling. Sådanne perspektiver reflekteres i begrebet *teacher agency*. Der findes flere forståelser af *teacher agency*. Ofte forstås det som noget, læreren individuelt besidder, og udviklingstiltag har således fokus på at udvikle den enkelte lærers kapacitet, men som et alternativ foreslår Priestley et al. (2015a) en helhedsorienteret tilgang til *teacher agency*. Her forstås *teacher agency* ikke som en individuel kapacitet, men som noget lærere gør, og hvorvidt *agency* udfoldes eller hæmmes afhænger af strukturelle forhold i den kontekst (*agential spaces*), som lærere altid vil handle i. *Teacher agency* er derfor i denne forståelse noget, der opnås gennem interaktioner mellem lærernes kapacitet og de kontekster, de agerer i.

Agency omfatter både tidsmæssigt og relationelt tre dimensioner: den iterative (fortiden), den projektive (fremtiden) og den praktisk-evaluerende (nutiden). Alle tre dimensioner spiller en rolle i konkrete handlinger, men deres bidrag varierer. *Agency* er således en tidsmæssigt indlejret proces, der involverer engagement baseret på viden og erfaringer fra fortiden, en orientering mod fremtiden ved at forestille sig alternative og mulige udfald samt handlinger i nutiden, som vurderes passende i forhold til de ønskede udfald (Priestley et al., 2015a, s. 3). Dette illustreres i figur 1 nedenfor.

Den projektive dimension vedrører lærernes forestillingsevne – nærmere betegnet deres evne til at forestille sig og aspirere mod alternative muligheder i fremtiden – både på kort og lang sigt: "the imaginative generation by actors of possible future trajectories of action, in which received structures of thought and action may be creatively reconfigured in relation to actors' hope, fears, and desires for the future" (Priestley et al., 2015a, s. 5). Denne dimension viser også, at *agency* er mere end blot handling, da refleksion over muligheder er en central dimension, og empirisk forskning viser, at samarbejde med forskning kan udvikle læreres *agency*.

Hvilke mål og muligheder, lærere kan forestille sig, er forbundet med den iterative dimension, som indbefatter lærernes biografi og professionelle historie. Jo større repertoire og mere erfaring lærere har, jo større er fundamentet for at udtænke nye fremtider (Priestley et al. 2015a, s. 4-5). Dette inkluderer "personal

capacity (skills and knowledge), beliefs (professional and personal) and values” (Priestley et al., 2015a, s. 4).



Figur 1. Model for sammenhæng mellem fortid, nutid og fremtid (Priestley et al., 2015a, s. 4).

Den praktisk-evaluerende dimension af læreragency i nutiden involverer lærernes evne til at træffe praktiske og normative vurderinger i forhold til de udfordringer og dilemmaer, de står over for: "the capacity of actors to make practical and normative judgements among alternative possible trajectories of action, in response to the emerging demands, dilemmas, and ambiguities of presently involving situations" (Priestley et al., 2015a, s. 6). Vurderingerne er påvirket af konteksten og kan forme beslutninger og handlinger. Dette relaterer sig både til kulturen for konteksten i lyset af ideer, værdier, overbevisning, diskurser samt til sprog og strukturelle forhold herunder de sociale strukturer. Forskning viser, at lærere på skoler med stærke relationelle ressourcer har større grad af *agency* end dem på skoler med begrænsede ressourcer. Relationelle ressourcer kan omfatte tillid, gensidig støtte, faglig dialog, mentorskab, samarbejde og adgang til ekstern ekspertise og ressourcer. Disse relationelle ressourcer spiller en vigtig rolle i at støtte lærerens *agency* ved at skabe muligheder for læring, udvikling og engagement i professionelle praksisser. Endelig kan, som det fremgår af figur 1, materielle forhold spille en rolle, både i form af ressourcer og fysiske rammer, og forhold som konflikter mellem

forskellige krav i lærernes arbejde og kvaliteten af relationer på skoler kan enten fremme eller hæmme *teacher agency*.

Vi anvender begrebet *agency* som et analytisk redskab til at identificere, hvorledes lærerne omtaler deres fortid, det iterationelle, i lyset af de fremtidige mål, det projektive, samt hvordan de agerer i nutiden. Derved kan begrebet forstås som en måde at arbejde didaktisk med elevers trivsel. I de skriftlige formulerede cases læser vi dette gennem ønsker og intentioner. I nutiden resulterer dette i deres forståelse af og valg af handlinger i undervisning, altså omtalt som det praktisk-evaluerende i nutiden. Dette kommer både til udtryk i deres skriftlige formuleringer i cases og konkretiseres som handler i observationer, som tydeliggør konteksten.

I forhold til vores præsentation af resultater anvendes teorien således til at undersøge *teacher agency* med henblik på trivsel.

Resultater

Som beskrevet ovenfor finder vi i ti af casene *agency*, mens der i de resterende især er opmærksomhed på udvalgte elever med problem, hvis årsager og løsninger primært findes uden for lærerens didaktiske muligheder. Casene viser læreres resignation over vilkår, ligesom de gennem projektet har udtrykt vanskeligheder med at finde tid og personlige ressourcer til at arbejde med udvikling som omtalt ovenfor med Rosas (2014) begreb acceleration og kontekstens betydning (Priestley et al., 2015a).

Blandt de ti cases er der alene hos én lærer optagethed af lærerrollens muligheder i forhold til relation til elever og gennem dette modvirke forskellige former for eksklusion. Fokus er derved især lærerens kapacitet. *Agency* kommer til udtryk i form af nutidige handlinger, når læreren skriver: "Jeg griber ind, når jeg hører det ske, men eleven siger, det oftest sker, når jeg ikke er til stede." Læreren har søgt at tale med de elever, som ekskluderer, men mener ikke, dette hjælper. I stedet overvejer han fremadrettet at have: "mere fokus på eleven, tage afstand fra deres opførsel, italesætte at der skal være plads til alle, stille sig nysgerrig på hans baggrund for at nedbryde nogle racistiske holdninger og meninger." Denne form for *agency* er i figur 1 vist som den midterste firkant, og læreren har udfoldet dette tidligere i projektets fokusgruppeinterviews (Duch, 2023).

En anden lærer arbejder med *agency* i form af en metode til læsning: "Stilladseret læring er en undervisningsmetode, der indebærer at give eleverne mere uafhængighed og ansvar for egen læring". Vi forstår det som en form for kulturel tilgang med tiltro til netop denne metode. I en anden case arbejder vedkommende med indretning af lokalet, altså med fokus på betydning af det fysiske rum. Dette ses også hos en tredje lærer i en case, og i en anden har den

samme lærer afprøvet nogle ting i forbindelse med gruppearbejde og beskriver nogle ideer til fremtidige initiativer:

Det gode gruppearbejde er ikke løst endnu, men det kunne være interessant at lave grupper, hvor de er sammensat efter nogenlunde samme faglige niveau samt ambitioner, og at de løbende får arbejdsopgaverne. Her er det min forhåbning, at de vil gå i en faglig dialog om opgaverne, så de ikke deler dem op, og gruppearbejdsrummet vil føles trygt.

I forhold til teorien om *agency* tænker hun således projektivt med henblik på en antagelse om, at elevers tryghed er central, og at de sociale relationer mellem elever kan ændres.

Hos to af lærerne er cases relateret til vores observationer, hvilket giver en fyldigere viden om konteksten. Samtidig finder vi hos disse lærere flere forhold af betydning for *agency*, hvorfor resultaterne præsenteres i to underafsnit. Den ene, Mikkel, hvor blandt andet betydningen af fortiden i form af livshistorie og professionel historie fremgår, den anden, Lene, hvor betydningen af hendes aktuelle læringssyn, der kan forstås som udtryk for et normativt standpunkt. Nutiden og fortiden omtalt i figur 1 får således på forskellig vis betydning for *agency* for de to.

Fortidens betydning for *agency*

Mikkel tematiserer i cases tre forskellige udfordringer og sine valg i forhold til at arbejde didaktisk hermed. Fælles for casene er dog, at de handler om at forbedre forholdet mellem elever.

En måde at gøre dette på begrundes af Mikkel i en case i sin livshistorie med erfaringer fra andre sektorer, altså ses fortidens betydning for *agency*:

Vi fik derpå lov til at bruge en hel dag på teambuilding. I mit tidligere arbejde [...] har jeg en del erfaring med lidt anderledes teambuilding, end det man almindeligvis bruger i skolesammenhæng med små øvelser i klasselokalet eller ude på plænen foran skolen. Jeg har en del teambuilding øvelser som meget synligt viser, at fælles planlægning og samarbejde er nødvendigt for at kunne gennemføre opgave.

Initiativet har krævet ændring af fysiske rammer for undervisningen, som har forudsat "lov" til at flytte undervisningen til "en skov", hvilket vi læser som accept fra ledelse på skolen. Samtidig har øvelser med teambuilding være koblet til forventninger til betydningen fremadrettet: "gør, at der i grupperne næsten altid er en eller to, som skal skubbe deres grænser lidt for, hvad de tør - og derfor har behov for hjælp fra de andre i gruppen." For de involverede elever ser han en ændring:

Resultatet var, at de på tværs af klikkerne fik et andet syn på hinanden, og alle viste stærke og svage sider i forbindelse med planlægning og gennemførelse af opgaverne - og det, at opgaverne var forskellige, gjorde at lederskab og initiativ i grupperne skiftede. Eleverne lærte hinanden bedre at kende, de holdt sig dog i de grupper, som

de oprindelig var blevet en del af, men de kunne være sammen i klasserummet på en fornuftig måde, og der var ikke nogen, som droppede ud.

Fastholdelse i uddannelsen er således eksplicit formuleret som et fremadrettet mål, som beskrevet med formuleringen "der var ikke nogen, som droppede ud."

Både i denne case og i en anden skrevet af Mikkel fremgår en tiltro til, at konkurrence er godt og kan motivere elever: "Jeg vurderer, at øget praksisnærhed og et lille element af konkurrence kan være med til at øge motivationen i forhold til at deltage aktivt både individuelt og i grupper." På den måde formulerer altså Mikkel sin ide i forhold til sine aktuelle didaktiske tilgang vist i firkanten i figur 1.

Både i en case og i observation er Mikkel optaget af forskellige grupperinger på et hold, som får betydning for elevers trivsel og faglige indsats. Grupperingerne relaterer sig til alder:

Vi har i år en klasse hvor aldersspredningen er særlig stor. Der er 3 grupper i klassen, den ene gruppe består af syv drenge og en pige i alderen 18 til 20 år. Den anden gruppe består af otte kvinder i alderen mellem 30 og 40 år. Udfordringen er, at der hurtigt opstår små konflikter mellem disse to grupper. Den tredje gruppe er aldersmæssigt mellem de to grupper og forholder sig neutralt.

Forskellen handler dog også om adfærd i undervisningen, om anvendelse af it til andet end faglige aktiviteter og om, hvorledes de responderer på hinandens adfærd. Vi vil karakterisere dette som forskellige diskurser i forhold til skolegang. Mikkel tilkendegiver et ønske om at agere med argumentationer for, at elevers læring fastholdelse: "Hvis ikke alle i et vist omfang føler, at de får de arbejdsbetingelser, de har behov for i forbindelse med læringen, er der risiko for, at nogle dropper ud." Han foreslår en løsning, som handler om rammesætning af sociale strukturer (jf. firkanten i figur 1):

En mulig løsning på udfordringen kunne være, at holdet opdeles i forbindelse med opgaveløsninger, konkret at unge-gruppen må forlade klassen og arbejde i fællesområdet. Ved gennemgang af opgaver skal ældre-gruppen holdes lidt tilbage, med en aktiv spøgen ind til unge-gruppen.

Af feltnoter fra observationen fremgår, hvorledes dette initieres mere konkret med, at de unge sendes til et andet lokale under et kort gruppearbejde: "Mikkel forklarer strukturen på en opgavebesvarelse: det faglige problem, faglige regler, faktorer bag problemet og løsning. De skal arbejde med at løse opgaver – bagerske række med drengen går til et andet lokale". Observationen viser også, hvorledes de lidt ældre kvinder placerer sig forrest i lokalet, spørger og agerer anderledes end de unge drenge, som sidder bagest, mens der nærmest tales udenom den tredje gruppe. Referatet fra det efterfølgende sparringsmøde viser, at vi som forskere kommer med yderligere forslag til didaktiske tiltag omkring struktur for undervisningen, kommunikation, roller i gruppearbejde, inddragelse af energien og motivationen i anvendelse af eleverfaringer samt mere

induktive arbejdsformer. Muligheder, som har været tematiseret gennem formidling og forslag til videre arbejde undervejs i projektets seminarer, hvorfor forskningsperspektiver direkte indgår. Det *kan* være, at dette bidrager til udvikling af *agency*.

Opsamlende kan således siges, at dele af Mikkels livshistorie og professionelle historie beskrives som af betydning for *agency*. Det fremgår også, at der er nogle fremadrettede mål, som især handler om at fastholde elever, og især at Mikkel i kraft af tidligere erfaringer formår at se nye muligheder i fremtiden, hvor gruppens interne dynamikker forandres positivt gennem handlinger i nutiden (den praktisk-evaluerede dimension). Diskurser og strukturer får analytisk set en betydning, ligesom der i en af casene arbejdes med justeringer af de fysiske muligheder. Samtidig mener vi, det er centralt, at det repertoire, som anvendes, synes begrænset, samt at refleksioner over valg er meget konkrete. Der henvises hverken til teorier, tiltag på skolen i samarbejde med kolleger eller til de forslag til opmærksomheder, som projektet har tematiseret og rammesat, så der kan med begrebet *agency* være en pointe i at styrke refleksioner og variationer i forhold til yderligere tiltag. Forskningen bidrager med perspektiver, hvis bidrag til forandring fremadrettet ikke er fulgt, men forstået i lyset af acceleration er yderligere indsatser nødvendigt med henblik på resonans.

Det aktuelle læringssyns betydning for *agency*

Lene tematiserer, som også nævnt ovenfor i en anden case, at mange elever har vanskeligt ved at læse, de er såkaldt læsesvage, og en del har dansk som andetsprog. For Lene er det op til eleverne at tage ansvar for at løse dette:

Meget af ansvaret ligger hos eleverne, da det kræver træning og øvelse at forbedre arbejdet med ældre tekster. Som underviser kan man bidrage med ordlister, mere tid til at læse [...], samt mere fokus på handling og forståelse i gennemgangen. En anden løsning kunne også være at lægge pensum ud i bedre tid, så eleverne kan tilgå det og forberede sig på forhånd. Det kræver dog meget målrettede elever, og det er ikke altid tilfældet.

Citatet viser, at lærere udarbejder materielle ressourcer til eleverne. I lyset af *agency* er lærerens muligheder dog begrænsede ifølge citatet – og dermed også ansvaret. Hun reflekterer over de fremtidige konsekvenser:

Derfor er det en udfordring, hvis elevernes danskkompetencer ikke er på et tilstrækkeligt niveau [...]. Det bliver også en udfordring, hvis danskfaget skal behandles som fremmedsprog i undervisningen for de elever, som har dansk som modersmål.

Denne case kan forstås som udtryk for den resignation, vi tidligere har talt om, idet det synes vanskeligt som undervisere at agere. Undervisere kan gøre en smule – lægge pensum ud i god tid – men elever griber sjældent muligheden som det fremtår af citatet "Det kræver dog meget målrettede elever, og det er ikke

altid tilfældet”, og hvis de udfordrede elever skal hjælpes, bliver det på bekostning af andre elever.

I en anden case synes mulighederne for *agency* bedre, selvom udgangspunktet formuleres som svært: ”Det er svært at få klassen til at tage ansvar for undervisningen og eget udbytte af undervisningen.” Lene vil tage nogle initiativer i forhold til at øge elevers ansvar:

Forsøge tilrettelægning af undervisning, hvor en større del af ansvaret for egen læring lægges ud til eleverne gennem forskellige didaktiske greb, som bevæger sig væk fra den klassiske styrede undervisning med spørgsmål og tavlegennemgang. I dette konkrete tilfælde forsøges der med at gøre eleverne ansvarlige for deres egen analyse og arbejde med en tekst, så de ikke får samme analysevejledning at løse opgaverne ud fra. På den måde vil de have forskellige tilgange og få forskellige svar, så man heller ikke på samme måde kan sidde og høste svar, når man ikke har samme spørgsmål.

Hun gentager som i den tidligere citerede case betydningen af, at elever tager ansvar: ”Forhåbentligt kan elevernes deltagelsesniveau og ansvarfølelse højnes igennem mere eksplicit ansvar for undervisningen”. Vi forstår dette som et udtryk for et læringssyn, en tro på at undervisning skal rammesættes, så elever tager ansvar, altså firkanten i figur 1. Hvordan hun arbejder med dette, fremgår af observationen. Eleverne skal selv tage ansvar for gruppedannelse to gange i løbet af lektionen, og de skal selv formulere spørgsmål til teksten og derefter besvare disse. I den første gruppe skal eleverne formulere spørgsmål til teksten, men som det fremgår af observationsnoter, er dette vanskeligt for nogle grupper, fordi ikke alle har læst og fundet teksten frem: ”Grupperne har fundet teksten frem. Det tager lidt tid. I den ene gruppe har en ikke læst, men en anden har overblik over, hvordan man kan stille forskellige typer spørgsmål.” Senere skal de udvælge nogle spørgsmål blandt de stillede i nye grupper. Dette synes vanskeligt for elever, som det fremgår af observationsnoter:

Gruppen taler lidt om, at de ikke ved, hvordan de skal løse opgaven. De læser spørgsmål op og bakser med at finde en arbejdsform, så de kan arbejde på tværs af de spørgsmål, som de har fra det tidligere gruppearbejde.

Lene har taget et initiativ med henblik på at fremme elevansvar, men eleverne taler også om andet end det faglige. Så på den ene side udviser hun *agency* helt i tråd med sit læringssyn, og på den anden side kan man diskutere, om eleverne kan praktisere denne ansvarlighed, fordi det er svært for dem. Som det fremgår af feltnoter samles op på klassen til slut:

Lene samler op på gruppearbejdet ved at grupper inviteres til at læse et af deres spørgsmål op. Spørgsmålet skrives på tavlen, og derefter arbejdes med svar, som også skrives på tavlen. Jeg ved ikke, om alle tager noter. Dialogen er kendetegnet ved, at eleverne er langsomme til at svare, at de svarer kort, og Lene skal stille en række opfølgende spørgsmål.

På sparringsmødet efterfølgende talte forskere og lærere om, som det fremgår af referatet, om en række andre mulige tiltag: Mulighederne for kollegialt samarbejde, fagdidaktiske teorier, didaktiske modeller, balancer mellem og holdninger til elevansvar og læreransvar som en værdimæssig diskussion, andre måder arbejde med roller i grupper samt samle op på gruppearbejde, holdninger til og begrundelser for, at elever kan sættes sig andre steder på skolen under gruppearbejde ude af syne for lærer, samt at arbejde med spørgeteknik og kommunikation i klasselokalet. Sparringsmødet med deltagelse af forskere og lærere er på den måde en mulighed for at pege fremad, anvende det projektive perspektiv vist i højre del af figur 1, med henblik på videre udvikling af *agency*. Vi ved dog ikke, om Lene efterfølgende anvender nogle af disse forslag, så de eventuelt kan forstås som bidrag til resonans.

Samarbejdets potentialer og muligheder for at bidrage til *agency* med henblik på trivsel

Som det fremgår ovenfor, så forudsætter et samarbejde mellem skoler og forskning baseret på aktionsforskning ikke alene mulighed for indsamling af data, men i nogle forståelser refleksioner over analyse og i andre forståelser drøftelse af resultater med henblik på forandring (Nielsen & Nielsen, 2015). Forskerrollen er således mere omfattende end begrebet eksterne ekspertice indikerer i den valgte tilgang til begrebet *agency* (Priestley et al., 2015a). Indsamling af data har i projektet været vanskelig på den måde, at lærere har haft begrænset tid til udvikling, hvilket kan være forklaring på, at så få cases kan forstås som et udtryk for *agency*, der leder til handling og ikke alene analyser eller refleksioner, selvom det forstås som væsentligt i teorien. Samtidig ser vi dette som et udtryk for det vilkår, som organisationer har, herunder de mange projekter, de deltager i (Mik-Meyer & Villadsen, 2007), og læreres oplevelse af acceleration (Rosa, 2014). Dette kan have betydning for fyldegheden af casene, at *agency* ikke fremstår tydeligere, og i det hele taget kvaliteten af datamateriale i casene. Dette udtrykker måske netop vilkår for samarbejdet i projekter, hvilket tematiseres af lærerne på sparringsmøder som tids- og opgavepres. For at lærerne ikke skal opleve deres deltagelse i udviklingsprojekter som dekkede fra deres undervisningspraksis og øget acceleration, tyder resultaterne på, at der er behov for videre arbejde, et arbejde, som kan involvere forskningsperspektiver på *agency*, og som afsætter tid til forandringer på længere sigt.

De cases, der er kategoriseret som udtryk for *agency*, viser kun i et tilfælde betydningen af fortiden hos lærere. Dette kan være fordi, det ikke direkte efterspørges i skabelon for cases eller i andre sammenhænge i projektet, men det kan også forstås som et udtryk for, at der ikke er en opmærksomhed på, at livs- og professionel baggrund har en betydning for didaktiske valg (Priestley et al.,

2015a). Derfor kan der være et udviklingsperspektiv i, at forskere tematiserer underviserernes professionelle historie, både som undervisere og udøvere af de erhverv, de underviser med henblik på i erhvervsuddannelser. Netop i disse erfaringer kunne måske findes et potentiale for lærernes arbejde med den projektive dimension (Priestley et al., 2015a). I forhold til det fremadrettede viser casene nogle ideer til, hvordan lærere reflekterer over mulige arbejder med sociale strukturer, de fysiske rammer og i et enkelt tilfælde med relationer lærer-elev. Generelt viser casene kombineret med observationer særlig *agency* som et strukturelt forhold, lærere rammesætter didaktisk med henblik på at fremme en bestemt adfærd hos elever. Det kunne tyde på, at forskningen med fordel kan introducere andre måder at udvikle disse områder på, så fokus ikke så let alene bliver *agential spaces*, men også individuel kapacitet samt insistere på de kollegiale samarbejder, som også de deltagende skoler ønsker at fremme, men som lærerne ser som næsten umulige i en travl hverdag. Selv korte møder er vanskelige at realisere for skolernes (projekt)ledere.

Selvom der i projektets seminarer er tematiseret didaktiske muligheder og viden inden for unge, kommunikation og gruppearbejde samt aktionslæring, synes dette i begrænset omfang anvendt i cases, og alene en case hos Lene kan fortolkes som udtryk for et læringssyn. Dette fremstår dog meget indirekte og forankres ikke konkret i en teori eller tilgang, hvilket heller ikke er tilfældet i den case, hvor en lærer taler om metoder inden for læsning. Der synes derfor at være et fravær af bevidsthed om pædagogisk og didaktisk teori eller det formuleres som meget praktiske forhold i den aktuelle undervisning, hvilket ikke trækker så direkte på lærernes pædagogiske uddannelse (Duch, 2017). I forhold til teorien om *agency* kalder dette på en opmærksomhed og bevidsthed, som skoler og forskning kan drøfte fremadrettet: vedligeholdelse af og fortsat udvikling af et pædagogisk-didaktisk repertoire. Muligheder for at hente viden og inspiration fra forskning i forhold til didaktiske valg er tematiseret på sparringsmøder, ligesom resultaterne i denne artikel efter projektet er formidlet og drøftet, men anvendelsen af den viden afhænger af det videre arbejde i organisationer, som har mange projektresultater at forholde sig til (Mik-Meyer & Villadsen, 2007). Vi ser derfor et behov for at arbejde yderligere med *teacher agency* i forskellige samarbejdskonstellationer mellem forskning og skoler. Dette forudsætter dog en form, som ikke øger oplevelsen af acceleration, men kan bidrage til resonans, hvilket forudsætter både tid og rammesætning.

Konklusion

Artiklens resultater viser, at samarbejdet mellem lærere og forskning gennem et projekt kan rette opmærksomhed på elevers trivsel, og at nogle lærere gennem nogle cases udviser *agency* i forhold til didaktiske valg i deres undervisning med

henblik på at øge trivsel. Fundene viser dog også, at det sker med et begrænset repertoire, og dermed kan forskningen pege på, hvor der for skolerne kan være brug for en indsats – og at forskningen kan bidrage med forskningsinformerede perspektiver på sådanne muligheder, en opgave som ligger inden for forståelsen af professionshøjskolars forskning (Danmarks Forsknings- og Innovationspolitiske råd, 2023). Samtidig viser resultaterne også, at lærerne er pressede af en øget acceleration (Rosa, 2014), hvilket kan være en forklaring på, at så mange af casene fokuserer på enkelte elever og at løsninger på trivselsproblemer må findes uden for klassens rammer. Det afgrænser for os at se forståelsen af lærernes opgaver i klasserummet, og måske det mindsker pres på dem, men det reducerer også læreropgaven.

Undervejs i projektet er sådanne forhold drøftet mellem forskning og (projekt)ledere på skoler, og skolerne arbejder videre med implementering på baggrund heraf, men vi ser det som en pointe, at der arbejdes systematisk videre med at analysere *teacher agency* og udvikle samarbejder mellem skole og forskning, som kan kvalificere sådanne initiativer – både undervejs i projekter og efterfølgende, når resultater som i dette tilfælde peger på *behov for grundlæggende drøftelser af forståelsen af undervisning og læreropgaven*. Det ser vi som en central pointe fra projektet, hvor der er behov for sådanne drøftelser ud fra andre teoretiske tilgange end det valgte (Priestley et al., 2015a). Aktionsforskningen kan bidrage ved at være den kritiske stemme, der henleder opmærksomheden på behov for sådanne grundlæggende drøftelser, som ikke alene formidler projektresultater. Hvorledes dette gøres i lyset af ikke alene korte, men langsigtede samarbejder finder vi behov for yderligere forskning i, således som også andre efterlyser (Danmarks Forsknings- og Innovationspolitiske råd, 2023).

Om forfatterne

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Möjligheter och begränsningar vid samverkan om undervisningsnära skolutveckling och forskning i yrkesutbildning

Possibilities and limitations in collaboration on teaching-related school development and practice-based research in vocational education

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Abstract

School development and practice-based research is now established as a type of collaboration to strengthen the scientific base of education, and to ensure that research addresses the needs of education. The example of collaboration in this study consists of teacher leaders in the role of leading teacher groups, and researchers. The purpose of the study is to identify opportunities and limitations in connection with teachers' and researchers' own initiatives for collaboration in teaching-related improvement work and practice-related studies in vocational education. The context is vocational education in upper secondary school. The study is practice-based, where data consists of researchers' field notes, observations, as well as data from teacher leaders' maps and analyses. The analytical tool is the theory of practice architectures. The results describe a culture and collaboration that promote school development, where teacher leaders and researchers are active in their respective roles and assignments. The result also makes visible limitations regarding the possibility of practical research despite a common interest. Practice-based research poses for example a greater challenge as it requires long-term commitment and temporal conditions. The discussion raises the questions of what type of collaboration is needed to meet the scientific basis of education, and to ensure that practice-based research addresses teachers' questions and the needs of vocational education.

Keywords: vocational education, collaboration, school-development, practice-based research



Studiens bakgrund och kontext

Den svenska gymnasieskolans mål och uppdrag är givna. För ett yrkesprogram handlar det om att varje elev ska ges möjlighet att utveckla generell kunskap och specifik yrkeskunskap. Detta kräver en lokal organisation och en struktur som stödjer kontinuerlig och systematisk uppföljning och utveckling av undervisningspraktiken, vilket dessutom är ett kännetecken för en framgångsrik skola (t.ex. Jarl m.fl., 2017). Rektor har mandat och uppdrag att organisera skolans systematiska kvalitetsarbete i samråd med medarbetare. Föreliggande studie tar sin utgångspunkt i en gymnasieskolas systematiska kvalitetsarbete. Den gymnasieskola som är aktuell i studien fick i samband med en nationell granskning kritik på flera punkter, vilket ledde till insatser inom ramen för den statliga satsningen *Samverkan för bästa skola* (SBS) (U2015/3357/S). För insatserna ansvarade ett närliggande lärosäte. Varje insats hade en så kallad insatsplan som beskrev mål och genomförande. Under det första året medverkande gymnasieskolans samtliga program. En av insatserna innebar att rektorer organiserade programhomogena grupper med lärare, så kallade lärgrupper, som ett sätt att arbeta systematiskt med undervisningsnära förbättringsarbete. För varje lärgrupp utsågs en lärledare. Lärledaren kan benämnas och betraktas som en mellanledare med ett särskilt uppdrag att strukturera och långsiktigt leda kollegor i lokal skolutveckling (Grootenboer m.fl., 2015; Liljenberg, 2015). Lärledarens uppdrag och roll finns därmed i en position som både representerar skolledningens intresse för systematisk skolutveckling och framgångsrika resultat, samt lärares arbete med att skapa förutsättningar för elevers lärande och kunskapsutveckling.

Under projektets första år formades den nya organisationen samt lärgruppernas arbete, med stöd av handledare från lärosätet. Det undervisningsnära arbetet i lärgrupper skulle enligt beslutad insatsplan genomföras som aktionsforskning, det vill säga via identifiering av problemområde, systematisk kartläggning, prövande av alternativ i form av aktioner samt uppföljning och analys i en spiralformad process (Rönnerman, 2022). Lärarna hade olika förväntningar och därmed olika förhållningssätt till insatsen, till handledningen, och det egna förväntade förbättringsarbetet. Handledarna uppfattade ett engagemang, men också passivitet eller avståndstagande (jmf. Brodie, 2021).

Under det andra året valde två av skolans rektorsområden, och därmed tre yrkesprogram, att fortsätta med insatsen genom att varje lärledare nu självständigt skulle leda en lärgrupp, med stöd av handledning från lärosätet. Nu fokuserade handledningen på processen i lärgruppen samt lärledarens uppdrag och roll. Efter dessa två inledande år har lärledarna i ett av skolans rektorsområden, som ansvarar för två yrkesprogram, samt lärosätets handledare, nu i rollen som forskare, etablerat en kontinuerlig kontakt och kommunikation med fortsatt fokus på lärgruppernas och lärledarnas arbete. Ett mål har också

varit att planera för och genomföra praktikhäna studier relaterat till det undervisningsnära förbättringsarbetet. Det egna initiativet och kontinuiteten omfattar nu sammanlagt fyra år av samverkan.

Den samverkan där lärledare och forskare agerar utifrån sina olika perspektiv och uppdrag leder nu till nya frågor. På vilket sätt kan lärledare vara en aktiv part i praktikhäna studier? Vilken betydelse har forskaren för lärledarens arbete? Vilken roll har forskaren i samverkan med en skola när motivet inte är ett planerat uppdrag? Frågorna kan relateras till studier om samverkan mellan lärare och forskare, där sammanhanget är praktikhäna forskning eller utvecklingsprojekt. Bungum och Sanne (2019) identifierar framgångsfaktorer för lärares aktiva engagemang i praktikhäna studier i form av "1. A shared and relevant challenge 2. An open entrance to the project 3. An allocated time and meeting space 4. Responsibility and autonomy" (s. 48). Lärares engagemang inom praktikhäna studier förefaller därmed handla om förutsättningar i form av transparens, inflytande, förtroende och faktiska möjligheter. Jarl m.fl. (2024) synliggör dock hur lärares roller är mer framträdande i vissa delar av praktikhäna studier såsom datainsamling, och mindre i samband med planering av en studie eller analysarbete. Här finns således en obalans som utmanar, eller som möjligen tydliggör, en naturlig arbetsfördelning. Hamza m.fl. (2017a) studerar lärares respektive forskares roller vid implementeringen av en didaktisk strategi i en undervisningspraktik. Här varierar lärares respektive forskares makt och ansvar beroende på vad som förväntas ske. Det kan förstås som att samverkan mellan lärare och forskare med ett särskilt ändamål behöver vara behovsstyrd och öppen för olika lösningar beroende på situation. Olin m.fl. (2021) identifierar hur lärare i samband med ett samverkansprojekt och via strukturerade dialoger utvecklar en distans från den egna yrkespraktiken och ser sig själva, i likhet med forskarna, som kunskapsproducenter. Dessa exempel på lärares och forskares förhållnings-sätt har troligen flera förklaringar såsom mål, förväntningar, kommunikation och struktur. Det finns således en rad utmaningar eller förutsättningar som behöver beaktas vid planering och genomförande av praktikhäna studier eller andra samverkansprojekt.

Trots att samverkan mellan lärare och forskare inte är en ny företeelse, finns det behov av kunskap om samverkanspraktiker där lärare och forskare är involverade, inte minst med anledning av att praktikhäna forskning har aktualiserats som en av lösningarna på skolans utmaningar (SOU 2018:19). Den kontext som studeras i föreliggande studie grundas i ett ömsesidigt intresse för undervisningsnära förbättringsarbete och möjlighet till praktikhäna studier. Här finns därmed en organisk och processinriktad samverkanpraktik, men utan specifikt innehållsligt uppdrag eller mål.

Studiens syfte

Syftet med studien är att identifiera möjligheter och begränsningar i samband med lärares och forskares egna initiativ till samverkan vid undervisningsnära förbättringsarbete och praktiktäna studier i yrkesutbildning.

Studien är praktiktäna där data består av deltagande observation, inspelning och mejlkommunikation. Data är således insamlade under pågående samverkan och i den studerade praktiken, och analyseras med stöd av teorin om praktikarkitekturer (TPA) (t.ex. Kemmis & Grootenboer, 2008; Rönnerman, 2018). Artikelns författare är en av de medverkande forskarna och har således varit delaktig både i den studerade processen samt i föreliggande studie.

Tidigare forskning

I detta avsnitt behandlas forskning om det sammanhang där studien genomförs, vilket innebär studier om läraren som mellanledare, forskaren i skolutvecklande och forskande sammanhang samt kollegialt lärande som modell för skolutveckling.

Mellanledarens uppdrag kan handla om att leda och handleda kollegor för att implementera det som bedöms som framgångsrikt eller att leda förbättringsarbete som identifieras av lärarna i den lokala praktiken, vilket av Levinsson (2011) beskrivs som två skolutvecklingsmodeller. I den studerade kontexten startade samverkan mellan skola och lärosäte som ett formulerat uppdrag att förbättra identifierade brister, samtidigt som förbättringsarbetet skulle genomföras som aktionsstudier där problemområde och frågeställning bestämdes av lärare. Här fanns således en tredje modell där mellanledaren och lärgrupperna identifierade och genomförde undervisningsnära projekt enligt ett målstyrt uppdrag, men med hög grad av frihet. Ett underliggande mål var därmed att skapa en struktur för det lokala systematiska kvalitetsarbetet.

En förutsättning för mellanledarens arbete förefaller vara en tydlig ledning och organisation för det kollegiala arbetet (Hirsh & Segolsson, 2019). Mellanledaren behöver i sin ledarroll bidra till en gemenskap och acceptans för det kollegiala arbetet, men också utmana kollegors vanor och förgivettagande (Liljenberg, 2015). Frost och Harris (2003) sammanfattar hur ledning av kollegor kräver en tydlig definition av roll och uppdrag, en medveten struktur, kultur och socialt kapital, samt en personlig kapacitet. Den personliga kapaciteten beskrivs som ledarskapsförmåga, innehållslig och kontextuell kunskap samt kommunikativ förmåga. Mellanledarens roll och det kollegiala arbetet behöver ha karaktär av ömsesidigt förtroende, erkännande, bemyndigande och stöd (Muijs & Harris, 2003). Läraren som mellanledare agerar därmed både i en organisation, i en kultur och som person.

Kollektiva förväntningar på en mellanledares funktion, roll och arbetssätt i organisationen måste förstås i relation till det formella uppdraget, samt tolkningar av detta uppdrag och dess mandat. Dock handlar alltid uppdraget om utveckling eller förändring. En mellanledare kan benämnas som en förändringsagent (Blossing, 2013). I analysen av förändringsagentens roller framträder biträdet respektive projektledaren som aktörer i skolans driftorganisation med nära koppling till rektors styrning och ledning, medan rollerna som handledare respektive organisationsutvecklare agerar inom en utvecklingsorganisation. Här menar Blossing att struktur och kommunikation i en lokal skola bestämmer vilken huvudsaklig roll förändringsagenten får och tar, samt hur den kan förändras över tid.

Forskaren kan ha olika uppdrag och roller i en skolutvecklingsprocess parallellt med praktisk forskning. Det kan innebära att vara delaktig och bidragande till den lokala processen, och att samtidigt följa och studera processen (t.ex. Bergmark m.fl., 2023; Hamza m.fl., 2017a). I vissa fall kan forskaren ha en mer stödjande roll (Hamza m.fl., 2017a), i andra fall kan lärosätets representant medverka mer aktivt både som handledare och med utbildande insatser (t.ex. Cheng m.fl., 2012). Samtidigt identifieras motsättningar och utmaningar avseende makt, kultur, tid, ägarskap och ledarskap (Day & Smethem, 2010). Forskare kan ta en mer autonom och möjligen självklar roll, samtidigt som detta kan bidra till en obalans i en planerad samverkan (Areljung m.fl., 2021; Jarl m.fl., 2024). Alvunger och Trulsson (2016) beskriver följeforskning som ett exempel på ömsesidigt lärande, där det krävs att forskaren har kunskap om det aktuella området både för att förstå och ges förtroende för det lokala projektet. Ytterligare en framgångsfaktor visar sig vara långsiktighet, att det gemensamma arbetet förväntas ta tid och kräva uthållighet.

Roller kan kombineras eller vara åtskilda beroende på uppdrag. Praktisk forskning i undervisningen där lärare och forskare är aktiva kan vara utmanande för båda parter beroende på förväntningar och föreställningar, men också de förutsättningar som ges. Forskarens roll och uppdrag ställs emot lärares behov och förväntningar (Olin & Ingerman, 2016). Olin m.fl. (2021) som studerar lärare och forskare i ett gemensamt författarskap synliggör en ömsesidig utmaning, men också en möjlighet i att identifiera något nytt hos sig själv genom att möta en annan yrkesroll i ett professionellt sammanhang, och i ett specifikt uppdrag. Bevins och Price (2014) identifierar tre typer av samarbete mellan lärare och forskare: som kund respektive leverantör, en påtvingad samverkan eller en ömsesidig samverkan. Studien framhåller betydelsen av mål och tydlig planering, tydliga förväntningar och strategier samt tillräckliga förutsättningar för att ett samarbete ska fungera. Hamza m.fl. (2017b) betonar synliggörande av att det är två olika praktiker som interagerar, och som båda berörs i någon mening. Lärare och forskare, undervisning och forskning kan dock förenas med

sina olika perspektiv, kunskaper och möjligheter. I en studie om samverkande aktionsforskning beskrivs hur medverkande lärare respektive forskare finner olika typer av möjligheter, till exempel att lärares arbete blir mer etablerat och att forskare får en närmare insyn i lärares yrkespraktik (Bruce m.fl., 2011). Vidare bidrar det ömsesidiga mötet och samtalet till ny kunskap. Lärare är intresserade av resultat av det lokala förbättringsarbetet och forskare ställer sig frågan vad som är relevant ur ett forskningsperspektiv.

Lärgruppens praktik kan förstås som en *professional learning community* (Edwards-Groves & Rönnerman, 2012; Opfer & Pedder, 2011), det vill säga ett gemensamt och samtidigt individuellt lärande som förväntas bidra till utveckling av en lokal verksamhet. Tidigare studier synliggör dock utmaningar som kan yttra sig på olika sätt beroende på uppdrag, förväntningar och förutsättningar, men också vad det kollegiala arbetet förväntas behandla för frågor och på vilket sätt detta ska ske (Fataar & Feldman, 2016; Langelotz, 2013). Fataar och Feldman (2016) identifierar behov av ett didaktiskt språk och en pedagogisk reflexivitet för att det kollegiala samtalet ska behandla och bearbeta de planerade frågorna.

Lärares engagemang eller aktivitet i ett kollegialt lärande kan grundas i flera orsaker. Brodie (2021) identifierar skäl såsom förståelsen av syftet med det kollegiala arbetet, viljan att förändra undervisningen, upplevelsen av mening och även tillit, tidsaspekten, samarbetet i gruppen samt stöd från ledning. Läraragens (*teacher agency*) kan förklaras som lärares handlingar i yrkesrelaterade situationer där kulturella, strukturella och materiella förutsättningar har betydelse (Priestley m.fl., 2015), samtidigt som det kan knytas till person och förmåga. Agens beskrivs som en ekologi, där sammanhang eller kontext interagerar med intentioner och möjligheter. Frey och Olin (2019) identifierar tre typer av agens i det kollegiala lärandet. Förbättrande agens som associerar till att genomföra åtgärder, kritisk-konstruktiv agens som är diskuterande och analytisk, och praktikagens som håller fast vid etablerad kultur.

I ambitionen att förbättra skolors resultat riktas i vissa fall mer uppmärksamhet mot struktur och organisation och formell kompetensutveckling än det som förväntas vara effekten av planerade åtgärder (Hopkins m.fl., 2014). Jahnke och Hirsh (2020) gör en analys av en skolas behov av förändring för att förbättra elevers resultat. Slutsatserna kan sammanfattas som att det krävs ett formativt långsiktigt arbete, med ett fåtal mål som kan följas upp med kontinuitet, och där undervisning och elevers lärande är i fokus (s. 53). Ett kollegialt arbete i form av lärgrupper är därmed ingen garanti för utveckling i en viss riktning, eller för att uppnå ett formulerat mål.

I studien är karaktären av samverkan när lärledare och forskare har ett ömsesidigt intresse för undervisningsnära förbättringsarbete och praktikinära forskning i en yrkesutbildning i fokus. Detta intresse bygger i sin tur på lärledares respektive forskares olika uppdrag och där samverkan uppfattas som givande

för dessa uppdrag. Redovisade studier bidrar med en översiktlig bild av möjligheter och begränsningar.

Teori och analysverktyg

Studiens analys stöds av teorin om praktikarkitekturer (Kemmis & Grootenboer, 2008; Rönnerman, 2018). Teorin om praktikarkitekturer används för att synliggöra och förstå en praktik. Med praktik avses här ett sammanhang som enligt teorin både hålls samman och förändras över tid genom uttryck av sägande (*sayings*), görande (*doings*) och relaterande (*relations*). Praktiken formas via, och formar, andra praktiker, det vill säga att den aldrig är isolerad, utan finns i ett sammanhang. Praktikarkitekturen utgör en slags analytisk ram som innefattar det som benämns som kulturella-diskursiva, materiella-ekonomiska och sociala-politiska arrangemang och som därmed definierar praktiken med dess möjligheter och begränsningar. Begreppet projekt används för att formulera det gemensamma målet och den process som ger en praktik eller praktiker "mening, sammanhang och en riktning" (Rönnerman, 2018, s. 47). Det projekt som är aktuellt i studien är en kontinuerlig samverkan för att skapa förutsättningar för att förena undervisningsnära förbättringsarbete och praktknära studier.

Undervisningsnära förbättringsarbete handlar om ett systematiskt arbete som avser att stärka undervisningen och elevers lärandeprocesser. En praktknära studie har ett närliggande och kontextuellt mål i det aktuella sammanhang där lärares frågor utgör grund. Kunskapen kan användas i den lokala praktiken, och samtidigt som ett mer långsiktigt mål bidra med generell kunskap. Teorin om praktikarkitekturer möjliggör en kritisk analys av praktiker (Rönnerman, 2018). Salo (2019) diskuterar hur den valda teorin kan vara användbar vid pedagogisk forskning där praktiker vanligen inte kan isoleras från varandra.

Metod

Studien har en etnografisk ansats där data har samlats in under en pågående process för att följa och dokumentera det som sägs och det som sker i olika sammanhang och där forskaren har varit delaktig och medskapare (Aspers, 2011, s. 108–110). Forskaren har således inte enbart varit observatör. Studiens data består av inspelade samtal och fältanteckningar från lärledarnas och forskarnas möten samt vid en dialogkonferens (Lund, 2008), skriftlig dokumentation från kartläggningar och uppföljningar inför och under arbetet med ett tema, och mejlkommunikation. Den ena typen av data har fokus på kommunikation och interaktion i en samverkande process under två år. Den andra typen av data utgörs av dokumentation och observation i anslutning till lärgruppernas arbete. Studiens data bidrar således med dokumentation för att kunna följa en praktik

(se Tabell 1). Analysen har utifrån tillgängliga data fokuserat händelser över tid samt roller och ageranden vid specifika tillfällen.

Fältanteckningar genomfördes av forskare vid möten med lärledare samt vid dialogkonferens. Dessa fältanteckningar skrevs för hand och anpassades till sitt innehåll och sin omfattning till den unika situationen (Walford, 2009). Möten med lärledare var en del av deras ordinarie möten. De genomfördes i gymnasieskolans lokaler eller som distansmöte och med en frekvens av tre möten per termin (sammanlagt tolv möten). Mötena behandlade nuläget i lärgruppens arbete och fortsatt planering samt lärledarnas uppdrag. Tre av dessa möten spelades in. Ett platsförlagt möte spelades in med mobil, och två distansmöten spelades in via Zoom. Inspelningarna transkriberades. Även vid dessa inspelade tillfällen skrevs fältanteckningar.

Dokumentationen av kartläggningar var det material som skapades i samband med planering av ett tema. Kartläggningarna innebar att lärledare samlade skriftlig information från lärare i lärgrupper samt intervjuade elever. Data från lärledares kartläggning samt lärledares analyser delades och diskuterades via delade dokument och mejlkommunikation men också vid möten med lärledare.

Gemensamt och dialogiskt skrivande om pågående samverkan genomfördes vid två tillfällen. Dokumentationen startade med de två forskarnas beskrivning. Därefter följde en skrivprocess där lärledare och forskare "svarade på" varandras skriftliga bidrag i en framväxande text. Målet med skrivandet var att synliggöra och dokumentera lärledares respektive forskares erfarenheter och reflektioner. I resultatavsnittet benämns exemplet från det dialogiska skrivandet som text om samverkan.

Således skapades över tid olika mer eller mindre strukturerade data i form av text som tillsammans gav en bild av praktiken. Inget av det empiriska materialet har fått dominera i ett inledande analysarbete, som därmed strävade efter att identifiera praktiken oavsett formen för, eller i vilket sammanhang något uttrycks, vilket av Aspers beskrivs som totalempiri (2011, s. 166–167). Denna totalempiri bidrog till en distans till data som på olika sätt synliggjorde händelser och uttryck. Analysen inleddes med upprepade genomläsningar av data. I nästa fas delades data i tre exempel som analyserades med stöd av TPA (Kemmis & Grootenboer, 2008; Rönnerman, 2018). Dessa tre exempel var a) kommunikation mellan lärledare och forskare i samband med kartläggning och planering av ett tema (möten och mejlkommunikation under två terminer), b) dialogkonferensen, c) dialogiskt skrivande om samverkan vid två tillfällen (två texter om samverkan).

Tabell 1. Översikt över typ av data, omfattning samt medverkande.

Data	Datainsamling	Medverkande
Fältanteckningar	Tre möten/ termin under två år. Omfattning: 60 minuter/möte	Tre lärledare och två forskare
Inspelade möten	Tre av de tolv mötena. Omfattning: tre timmar	Tre lärledare och två forskare
Lärledares dokumentation av kartläggning i samband med ett förbättringsarbete	Lärares skriftliga svar på frågor från lärledare Lärledares analys Omfattning: sex sidor dataskriven text Lärledares sammanställning och analys av elevers svar på frågor vid samtal med elever Omfattning: åtta sidor dataskriven text	Lärledare och lärare i lärgrupper Lärledare och elever
Dialogkonferens	En dialogkonferens Omfattning: sex timmar	Tre lärgrupper, tre lärledare och två forskare
Gemensam dokumentation om process och resultat av samverkan	Två texter där lärledare och forskare var för sig läser och kommenterar i ett delat dokument Omfattning: respektive text behandlades under en månad	Tre lärledare och två forskare
Mejlkommunikation	Planering av teman i lärgrupper samt uppföljning efter möten Omfattning: återkommande under två år	Tre lärledare och två forskare

Data analyserades inledningsvis genom att identifiera sägande, görande och relaterande. Utifrån denna analys tolkades sedan iakttagelserna i form av kulturella-diskursiva, materiella-ekonomiska och sociala-politiska arrangemang, samt dess möjliggörande och begränsande uttryck. Det avslutande steget innebar

att ytterligare fördjupa analysen genom att identifiera karaktären av samverkan för undervisningsnära förbättringsarbete och praktknära studier och hur den kan forma lärledares och forskares samverkanspraktik. Analysarbetet inspirerades av tidigare studier där TPA används (Berglund m.fl., 2020; Kemmis & Green, 2013). Begreppet samverkanspraktik användes för att identifiera praktiken i avgränsning till andra praktiker i det aktuella sammanhanget.

Studiens etiska ställningstaganden styrdes dels av att de båda medverkande forskarna fungerade som kritiska "vänner" i dialogen med lärledare, dels av forskarnas intresse för att praktknära studier. Det innebar i nästa skede att studiens forskare och artikelns författare har dubbla roller. Här kan etiska frågor ställas på prov. Forskarens dubbla roller kan leda till etiska frågor om makt, respekt, insyn i varandras praktiker och risk för partiskhet (Eriksson, 2018). Å andra sidan innebar en långvarig samverkan och ett ömsesidigt intresse att det fanns ett förtroende och en respekt för varandras utgångspunkter, intressen och behov (se Bungum & Sanne, 2019). Här fanns en medvetenhet om förhållningssätt, öppenhet och tillit. Studiens analysarbete bidrog dock till en distans genom att som forskare förhålla sig till studiens syfte. Forskarrollen blev därmed fokuserad på att identifiera resultat och generell kunskap. Samtliga berörda är informerade om studien.

Här aktualiserades också frågor om validitet och reliabilitet. En praktknära studie där forskare har varit delaktiga i en längre gemensam process, men där en av forskarna på egen hand har planerat och genomfört studien där syfte, data och analys inbegriper både lärledare och forskare är ur flera aspekter en utmaning. Ett förhållningssätt är dock att vara distanserad till det upplevda, att inse att det finns ingen rätt tolkning eller sanning utan att snarare se resultatet som en produkt av en rad tolkningar under en längre tid, och som nu har strukturerats via en vald teori (Ödman, 2005).

Resultat

Resultatavsnittet beskriver inledningsvis de tre exemplen från den gemensamma praktiken där sägande, görande och relaterande synliggörs. Analysen av samverkanspraktiken sker genom att identifiera kulturella-diskursiva, materiella-ekonomiska och sociala-politiska arrangemang med beskrivningarna som empiriska exempel, och med stöd av kompletterande data. Avslutningsvis finns en samlad analys av praktikarkitekturen, riktad mot studiens syfte om möjligheter och begränsningar i en praktik där lärledare och forskare via egna initiativ samverkar för undervisningsnära förbättringsarbete och praktknära studier i en yrkesutbildning.

Exempel 1: Pågående förbättringsarbete och start av praktiktäna studier

Ett exempel på samverkansaktivitet innebär att forskarna följer arbetet med ett valt tema. Forskarna tar del av lärledarnas beskrivningar av det som sker, samt medverkar aktivt i analysarbete och kontinuerlig uppföljning, där lärledares dokumentation används som underlag. Praktikens innehåll formas här av rektorsområdets kontinuerliga plan för undervisningsnära förbättringsarbete. Det kollegiala arbetet i lärgrupperna är en utgångspunkt för samverkansaktiviteten.

Utifrån identifierade behov beslutar rektor i dialog med medarbetare om det gemensamma temat under kommande läsår. Resurser för att stödja temat i form av artiklar eller litteratur väljs i samråd mellan lärledarna och rektor, och i vissa fall med synpunkter från forskare. Rektor följer arbetet i lärgrupperna och lärledarnas samverkan med forskare genom medverkan vid möten.

Ett exempel på tema är "formativ bedömning". Inledningsvis beskriver lärledare en osäkerhet om hur lärgrupperna ska ta sig an temat. Lärledarna kommunicerar en uppfattning till forskarna om att ta del av studier om formativ bedömning. Forskarna tar här en vägledande roll via rådet att börja i den egna praktiken och ta vara på det som redan sker, och den erfarenhet som finns. Argumentet är att synliggöra och använda befintlig kunskap och rutiner, för att sedan analysera och formulera avgränsade områden inom temat.

Bedömning ingår i yrkesskickligheten. Behöriga lärare har kunskap för att kunna skapa underlag för bedömning, bedöma och sätta betyg. Men diskussionen handlar sällan om hur lärare som kan faktiskt gör, utan mer om att lärare inte är tillräckligt kunniga. Kan man lyfta pågående praktik och ha den som underlag? Kan man börja i det som sker idag? Kan man börja i lärarnas kompetenta, professionella egna praktik? Det man läser kan man jämföra med egen praktik och värdera om det är något som ska förändras. Genom att läsa eller lyssna på andra (forskning och lärarerfarenhet) får man distans och kan värdera egen praktik på ett tydligare sätt, i vissa fall förändra den. Men också få bekräftelse. (Forskares mejl till lärledare)

Vid starten av temat om formativ bedömning gör lärledare efter förslag från forskare en kartläggning av lärares formativa bedömningspraktiker. Lärledarna genomför också intervjuer med elever om deras uppfattning om och upplevelse av formativ bedömning. Med rådet att rikta blicken mot den egna praktiken gör lärgrupperna en egen analys, som både bekräftar det som sker och synliggör mer specifika behov. Lärledarna delar insamlad information, sin analys och förslag på mer avgränsade utvecklingsområden om formativ bedömning med forskarna, som föreslår att koncentrera dessa områden till två. Här sker således en dialog där lärledarna leder en process i lärgrupperna med tips från forskarna. Lärgruppernas samlade erfarenhet och elevernas "röster" bidrar till att se generella mönster som inte är relaterade till enskilda lärare, utan snarare utgör en del av yrkesutbildningens roll och situation i en vidare kontext. Den information som lärledare samlar in samt dialogen med forskare leder till att

avgränsa temat till "muntlig formativ återkoppling i undervisningen". Motivet är att undersöka former för en interaktiv, effektiv, meningsskapande återkoppling. Forskarna bestämmer sig för att utifrån den inledande kartläggningen följa lärledarnas arbete med det avgränsade temat i ett praktiktäna forskningsprojekt.

Lärgruppen väljer olika former av muntlig formativ återkoppling som lärarna prövar i den egna undervisningen. Därefter bearbetas resultat och erfarenheter i respektive lärgrupp. När lärledarna möter forskare sker avstämning om nuläge och ett samtal om vägen framåt.

Vi skulle också vid nästa möte vilja höra kort om: 1) Vilka konkreta handlingar har prövats av lärgruppens deltagare, 2) Hur har dessa sen behandlats/följts upp i gruppen, 3) Vad har dessa konkreta handlingar bidragit med i det kollegiala arbetet? Kanske kan denna sammanfattande redogörelse även fungera som rapport till rektor? (Forskarens förslag på mötesstruktur inför kommande möte)

Möten mellan lärledare och forskare bidrar till att sätta ord på det som sker och synliggöra gemensamma och skilda erfarenheter, med utgångspunkt i det planerade. Forskarna analyserar underlaget från kartläggningen. Här finns data för att studera lärares respektive elevers erfarenhet och uppfattning om formativ bedömning.

Arbetet med ett tema planeras inledningsvis att pågå under ett läsår. Förbättringsarbetet om formativ bedömning blir dock redan efter en termin underordnat ett mer aktuellt område. Lärledarna beskriver en upplevd utmaning i att andelen elever som inte har gjort ett aktivt och medvetet val av gymnasieprogram har ökat. Dessa elever är därmed inte förberedda på innehållet och målet med vald yrkesutbildning. Det planerade temat om formativ bedömning behöver ta en paus och arbetet i lärgrupperna riktas mot frågor om att skapa förutsättningar för elevers aktiva medverkan i yrkesutbildningen. En lärledare uttrycker att: "Det är inte möjligt att ägna sig åt formativ bedömning, när undervisningen ägnas åt att introducera elever i deras valda yrkesutbildning och vad som förväntas av eleverna". Den planerade praktiktäna studien för att följa processen med att pröva formativ bedömning i undervisningen mister därmed möjligheten att fortsatt samla praktiktäna data.

Forskarna, som är angelägna om att forskningsfrågor har sin grund i utbildnings- och undervisningspraktikens behov, ser nu via lärares iakttagelse av elevers val av gymnasieprogram en ny relevant fråga växa fram. De börjar diskutera ett underlag för en forskningsansökan. Lärledarna uttrycker samtidigt dilemmat mellan det planerade och långsiktiga respektive det mer närliggande behovet. Lärledarna ser behov av styrning och struktur i lärgruppens arbete för att inte hamna i en situation där nya utmaningar stör ett identifierat mål och en pågående process: "Vilket arbete ska vi hålla i, vad ska vi avsluta, göra färdigt?" (lärledare vid möte med forskare). Den praktik som ska bidra till undervisnings-

nära utveckling och praktikinära forskning behöver både anpassas till det aktuella och bidra till ett långsiktigt arbete. Dock kan det långsiktiga hindras av den aktuella situationen.

Exempel 2: Dialogkonferensen för en fördjupad och gemensam kunskap

Nästa exempel på samverkansaktivitet är en dialogkonferens. Dialogkonferensens format är bekant för de flesta lärarna. Dialogkonferensen innehåller inspel från forskning och från yrkespraktiken samt dialoger i lärgrupperna. Konferensen genomförs under en heldag och utanför skolans lokaler.

Dialogkonferensens innehåll planeras av lärledare och forskare och konferensen leds av lärledarna. Syftet med ansvarsfördelningen är att tydliggöra hur dialogkonferensen utgör en del av det lokala förbättringsarbetet och lärledarnas uppdrag. Inledningsvis presenteras den lokala historien med start i SBS-projektet för att ge en gemensam bild av rektorsområdets systematiska förbättringsarbete, motivet till den lokala organisationen och forskarnas medverkan. Begreppet samverkan beskrivs som "samverkan gymnasieskola och lärosäte, utbildning och forskning samt lärare och forskare" (forskare). Samverkan sätts således in i ett sammanhang och över tid.

Det praktikgrundade inspelet utgörs av att en yrkeslärare samt en av forskarna presenterar en yrkesdidaktisk modell. Modellen är lokalt utformad och utvecklad av yrkeslärare. I det vetenskapligt grundade inspelet presenterar en inbjuden forskare "Lärararbetet i förändring". Mellan dessa inspel genomförs reflekterande samtal i grupperna. Dessa samtal avslutas med en gemensam sammanfattning där grupperna delger varandra exempel från respektive samtal. Dagen präglas av engagerade samtal mellan lärare som vanligen inte möter varandra i det dagliga arbetet. Här finns därmed också samtal om jämförelser mellan yrkesprogram och mellan olika typer av ämnen i en yrkesutbildning.

Lärledare uttrycker hur dialogkonferensen bidrar till att "diskutera, jämföra och förstå varandra". Vid dialogkonferensen uppmärksammas gemensamma och enskilda problemområden (beroende på ämne och program). Dialogkonferensen är även ett tillfälle för forskarna att göra sig själva synliga, beskriva motivet till sin närvaro i gymnasieskolan och att tydliggöra forskningens roll i ett undervisningsnära förbättringsarbete. En fråga som lärledare och forskare ställer sig efter dialogkonferensen är hur den ska följas upp och tas till vara i lärgrupperna som en del av det lokala förbättringsarbetet.

Exempel 3: Lärledares och forskares analyser och gemensamma dokumentation

Ytterligare ett exempel på samverkansaktivitet är lärledares och forskares dialogiska skrivande. Vid det första tillfället är syftet att inför ett nytt läsår samla lärledares och forskare erfarenheter i en gemensam text. Vid det andra tillfället

ska dokumentationen användas för ett kapitel i en rapport på temat samverkan. De gemensamma texterna används även som underlag inför planering av presentationer vid forskningskonferenser eller olika former av seminarier. Presentationerna initieras av forskarna via deras kontakter med till exempel lärosäten och nätverk. Både lärledare och forskare medverkar vid presentationer.

Forskarna inleder skrivandet, och lärledare samt forskare kan sedan bidra med kommentarer och texter under en planerad period. Forskarna ger en inledande vägledning av vad texten ska behandla och betydelsen av att både lärledares och forskares erfarenhet och arbete ska ger utrymme.

Bakgrunden försöker att beskriva hur vårt samarbete vuxit fram, en slags historik. Hur ser ni på denna beskrivning? Är det en trovärdig återgivning av det som har hänt? Vad håller ni med om eller inte håller med om, och hur skulle ni vilja förtydliga? (Forskarnas inledning i text om samverkan)

Lärledare och forskare ges således samma möjlighet att formulera innehållet. Förutom att producera en text bidrar det dialogiska skrivandet till att stanna upp, att upptäcka både det gemensamma och det som skiljer ur lärledares respektive forskares perspektiv. Ett exempel som uttrycks av lärledare handlar om yrkesutbildningens respektive forskningens tidsramar. "Vi har så olika arbetstakter, där skolan ständigt ska förändras snabbt medan universitetet arbetar mer långsiktigt och kopplat till forskning. När skolan kommit på något nytt så är universitetet inte riktigt med än." (lärledare i text om samverkan). Ett annat exempel handlar om förändringen över tid. "Vi kan se en kulturförändring i att våga diskutera och samtala kring egen undervisning. Det har varit givande att prova samma sak i klassrummet, för att sedan diskutera resultat eller erfarenheter i lärgrupperna." (lärledare i text om samverkan). I texten uttrycks samverkan mellan lärledare och forskare som något som sker strukturerat och kontinuerligt, med ett ömsesidigt intresse för didaktiska frågeställningar. Forskarna uttrycker betydelsen av att lärledarnas bidrag från samtal i lärgrupper kan kombineras med forskarnas mer distanserade resonemang. Här används metaforen "bro" om lärledarens betydelse för att länka mellan lärare och forskare samt mellan undervisning och didaktiska studier. Den gemensamma och därmed interaktiva skrivprocessen synliggör och sammanfattar både det sagda och det uppfattade hos lärledare respektive forskare.

Samverkanspraktikens arrangemang

De tre beskrivningarna av samverkansaktiviteter identifierar sägande, görande och relaterande i den studerade praktiken. De kulturella-diskursiva, materiella-ekonomiska och sociala-politiska arrangemang som formar och formas i samverkanspraktiken synliggör möjligheter, men också begränsningar, som bidrar till en slags balans och samtidigt till obalans.

Det kulturella-diskursiva arrangemanget synliggör en samverkan som kännetecknas av en pågående dialog, gemensam planering och genomförande av det planerade. Arrangemanget kännetecknas av ömsesidighet och stabilitet som kommer till uttryck i samtal, mejlkommunikation, aktiviteter, och textproduktion. Även om lärledare av olika skäl byts ut (till exempel på grund av byte av anställning), så påverkas inte arrangemanget till sin form. Det kulturella-diskursiva arrangemanget beskrivs i den första gemensamma texten: "Möten mellan forskare och lärledare kännetecknas också av perspektivbyte och kulturförändring. I stället för att utgöra ett stöd vid förbättringsarbete, är nu forskare samtalspartners." (forskare i text om samverkan). Således märks skillnaden mellan forskarens roll vid ett uppdrag, respektive när det finns ett eget initiativ. Att vara samtalspartner innebär en typ av samstämmighet som kräver en gemensam kunskap om kontexten. En förutsättning för dialogen tycks vara forskarnas kunskap om yrkesutbildning. "Ni ger en bra bild. Det känns att ni är väldigt insatta." (lärledare vid möte). Lärledarna uttrycker det unika med lärgruppsarbetet genom att jämföra andra typer av grupperingar, till exempel arbetslaget som synliggör "balansen mellan drift och utveckling" (lärledare vid möte) eller att "lärgruppsmötet är inte som ett apt" (lärledare vid möte). Lärledarna formulerar vad som formar det egna uppdraget och vad som inte ingår, vilket kan uppfattas som ett uttryck för rollen som förändringsagent (Blossing, 2013). Lärledarna bevakar att utvecklingsbehov ges utrymme samt har huvudansvar för en process som förväntas leda till förbättring inom identifierade utvecklings-områden.

Forskarna samlar information om lärgruppens och lärledarens arbete via samtal vid möten samt mejlkommunikation. När forskare möter undervisningens vardag via kommunikationen med lärledare behandlas i första hand nuläge, förutsättningar och möjliga handlingar. Forskarna får insyn i aktuella undervisningsnära frågor samt i både lärares och lärledares upplevelser och erfarenheter. De bidrar även med en distanserad blick på det som sker genom att ställa frågor och svara på frågor, ta del av och diskutera kartläggningar samt resonera om problemområden. Forskarna kan inte styra teman eller innehåll i samtal utifrån egna intressen. De egna intressena behöver därmed stå tillbaka för praktikens behov och frågor. Parallellt identifieras dock möjliga forskningsfrågor, inspirerade av den lokala kontexten. Här är forskarna initiativtagare genom sin vardagliga närhet till forskning samt intresset för och uppdraget att bidra med kunskapsutveckling.

För att leda en fungerande process i lärgruppen krävs förutsättningar och en tydlig strategi. Strategin har inledningsvis grundats i en given mötesstruktur. Efterhand formas dock andra strategier. Från att ha följt en given modell kan lärledarna öppna för en mer spontan dialog vid behov. "Magin låg inte i modellen i sig utan att vi började prata med varandra kollegialt om vår

undervisningspraktik.” (lärledare vid möte). Lärledare talar också om balans mellan förutsättningar och målinriktat arbete och betydelsen av att ”hålla i” (lärledare vid möte). Lärledare beskriver förskjutningen från osäkerhet om uppdraget och dess funktion till trygghet, ett sätt att förhålla sig till både andras förväntningar och egna strategier, ”tro på processen och glöm inte syftet” (lärledare vid möte). Rollen som lärledare i samverkan med forskare kan kulturellt-diskursivt beskrivas som strukturerad, process- och målinriktad och självständig. Forskarens roll i samverkan handlar i stället om att vara öppen för det som uttrycks i dialogen med lärledare och möta processen, vilket kräver en anpassning och flexibilitet. Men också att bevaka vetenskapligt förhållningssätt via frågor och synpunkter. Det undervisningsnära förbättringsarbetet är i hög grad styrande för forskarens aktivitet. Det kulturella-diskursiva arrangemanget kännetecknas av ett pågående samtal som kan betecknas som organiskt och behovsstyrt och samtidigt planerat och målstyrt.

Det materiella-ekonomiska arrangemanget styrs av faktorer som tid, plats och typ av aktivitet. Lärledare och forskare har via sitt initiativ att fortsätta med planerade möten efter det formella uppdragets avslut utvecklat en rutin där en mötesordning planeras inför varje termin, samt att övriga typer av aktiviteter planeras i samråd, till exempel dialogkonferens eller medverkan vid konferens. Aktiviteter sker således i form av regelbundna möten enligt rutin och vid särskilda tillfällen. Lärledarna har tid i sin tjänst och forskarna kan avsätta tid via egen forskningstid. Den fysiska platsen för möten är vanligen i gymnasieskolans lokaler. Det materiella-ekonomiska arrangemanget kännetecknas av planerade möten, men också mer spontan kommunikation via mejl. Kontakten bibehålls på olika sätt och utifrån lärledares respektive forskares initiativ.

Det sociala-politiska arrangemanget har flera dimensioner. För det första ryms här skolans systematiska kvalitetsarbete som både ska bidra till en ökad andel elever med gymnasieexamen efter tre år och till ett positivt underlag vid olika typer av granskningar, vilket innebär både ett politiskt och ett ekonomiskt perspektiv. Här finns också aspekter som elevers val av gymnasieskola och den kommunicerade ”bilden” av en skola i kris eller en framgångsrik skola.

Inom det sociala-politiska arrangemanget har lärledare och forskare olika roller, uppdrag och därmed intressen. Lärledaren leder det lokala undervisningsnära förbättringsarbetet via uppdrag från rektor och rektorsområdets beslut om organisation och om aktuellt tema. Uppdraget innebär också ett mandat att fatta egna beslut beroende på den pågående processen. Ett exempel är när ett planerat tema inte kan fullföljas på grund av förutsättningar som kräver en annan prioritering (exempel 1). Forskaren har via sitt forskningsintresse och kunskap om yrkesutbildning en närhet till undervisningspraktiken och lärgruppernas arbete. Det finns en kontextkunskap om det pågående arbetet i lärgruppen och därmed också i samtalet med lärledare (Alvunger & Trulsson, 2016). Här finns

både en närhet och en distans genom de olika vardagliga rollerna och uppdragen som lärledare respektive forskare. Forskaren är via sin distans både en kritisk granskare, en vägledare och en forskare som intresserar sig för praktikinära studier. Lärledarens distans uttrycks till exempel vid det dialogiska skrivandet och i möten där erfarenheter bearbetas.

Det sociala-politiska arrangemanget styrs i hög grad av lärledares mandat att leda kollegor (Priestley m.fl., 2015). Lärledarens agens formas av det som har skett över tid och det som formas i nuet. Kontinuiteten finns inte i den person som har uppdraget som lärledare, utan snarare i kulturen i lärgruppen, och i lärledargruppen. Här finns en trygghet och en känsla av kontroll. Det samma gäller när lärgruppens konstruktion förändras, vilket vanligen sker vid terminsbyten, där lärledaren behöver "backa, och sen bygga vidare" (lärledare vid möte). Lärledaren blir en nyckelfunktion som bidrar till motiv och engagemang i det kollegiala mötet. Utifrån Frey och Olin (2019) innehar lärledarna både förbättrande och kritisk-konstruktiv agens i relation till teman och problemområden.

Det sociala-politiska arrangemanget stöds av rektors, lärledares och lärares engagemang och ambition att via det kollegiala arbetet skapa bästa förutsättningar för alla elever, samt forskarnas uppdrag att på olika sätt bidra med kompetens, möjligheter till externa dialoger, erfarenhetsutbyte och forskningsinitiativ. Yrkesutbildning ställer en rad krav och förväntningar på innehåll och resultat. Lärgruppens arbete behöver dels vara knutet till respektive representerat ämne, dels förhålla sig till yrkesutbildningen som helhet. Detta gäller även forskarna som behöver ha en kunskap om yrkesutbildningens karaktär och mål. Även här behöver lärledarnas och forskarnas samverkan balansera mellan yrkesutbildningens konstruktion och struktur, elevers förväntade yrkeskunskap samt målet med anställningsbarhet efter avslutad yrkesutbildning.

Forskaren ingår i den interaktiva processen i sin dubbla roll som kritisk granskare och med intresset för att fånga upp praktikinära forskningsbehov. Lärledare och skola får samtidigt en närhet till en forskningsmiljö, samt att lärledarna ges möjlighet att tillsammans med forskare ta del av och kommunicera forskning vid konferenser och andra typer av möten. Lärledarna ges möjlighet att bredda och fördjupa sin kunskap. Forskaren är den som bjuder in, vilket är ett tecken på pågående praktikinära samverkan mellan yrkesutbildning och forskning (SFS 2021:1335; SOU 2018:19). En möjlighet som kan identifieras i den samverkan som studeras är kunskap som lärledare respektive forskare ges tillträde till i form av vetenskapligt förhållningssätt via närhet till en forskarpraktik respektive insyn i yrkesutbildningens undervisningsnära kontext där lärgrupper och lärledare bidrar. Lärledarna och forskarna utvecklar ny eller fördjupad kunskap som kan användas i övriga praktiker.

Samverkan har också begränsningar som kan definieras som obalans mellan tidsperspektiv, möjlig flexibilitet och krav på resultat. Forskarnas huvudsakliga intresse är att bidra med praktikhäna studier inom det pedagogiska området. Praktiknära studier innebär vanligen att följa och analysera något pågående. Närheten till en utbildningsmiljö möjliggör insyn i lärares identifierade problemområden. En begränsande faktor för forskaren är att balansera mellan skolans i vissa fall snabba skiftningar mellan identifierade problemområden och behov av analys och handling samt forskningens mer långsiktiga tidsperspektiv. Här framträder det som benämns som "otakt" (forskare i text om samverkan) mellan skolans och lärgruppens aktuella arbete och en planerad studie som efter en tid kan uppfattas som inaktuell, eller i alla fall hamna i ett konkurrensförhållande med för skolans mer angelägna teman. Nuets förutsättningar villkorar vad som görs möjligt och vad som är nödvändigt. Praktiknära studier kan vara mer eller mindre angelägna och prioriterade beroende på vilka behov som ska tillgodoses och beroende på det tidsperspektiv som är möjligt.

Forskarnas roll kan uppfattas som mer komplex än lärledarnas. Forskningen blir vanligen underordnad, medan det forskande och vetenskapliga förhållningssättet görs synligt och är användbart i lärgrupparbetet. Den framåtriktade dimensionen är vag, eftersom samverkan i grunden handlar om lärledarnas och forskarnas intresse att mötas, men att det saknas ett tydligt syfte eller uppdrag och därmed framtida tidsperspektiv. Forskning är inte det primära för samverkan, vilket kan skapa en utmaning i att prata om forskningsaktivitet och forskningsprojekt, samtidigt som samverkan kan vara en förutsättning för praktiknära forskning.

Diskussion

Syftet med studien är att identifiera möjligheter och begränsningar i samband med lärares och forskares egna initiativ till samverkan om undervisningsnära förbättringsarbete och praktiknära studier i yrkesutbildning. Studiens unika kunskapsbidrag skapas via dess kontext, där lärledare och forskare under en period av sex år har haft en kontinuerlig kontakt. De två första åren styrdes av en extern granskning och de fyra efterföljande åren är en konsekvens av ett gemensamt intresse för samverkan. Studiens kunskapsbidrag berör intresset för samverkan vid skolutveckling samt praktiknära forskning, där forskningsfrågor ska hämtas från lärares praktik och lärares identifierade problemområden, men där också de praktiknära studierna ska ha en tydlig förankring i den studerade kontexten och därmed det lokala skolutvecklingsarbetet (SOU 2018:19).

I den aktuella studien skapas kontakten mellan lärledare och forskare i samband med ett uppdrag. De sex åren av samverkan övergår sedan i ett eget initiativ. Studiens resultat belyser de möjligheter och begränsningar som både

formas i och formar den aktuella kontexten. Diskussionen behandlar två frågor som aktualiseras i studiens resultat. Den första frågan rör målet med samverkan för att stödja skolutveckling och praktikinära forskning. Den andra frågan handlar om skolutveckling på vetenskaplig grund.

Studier där forskaren samlar data i ett klassrum och sedan lämnar skolan och dess lärare för att på egen hand, eller tillsammans med forskarkollegor, genomföra analysarbetet, kan inte klassas som praktikinära forskning även om problemområdet är formulerat av lärarna. Här finns dock olika former och rutiner från att lärare är medverkande i studien som helhet, till att lärare bidrar med valda delar (Jarl m.fl., 2024). Även om intresset för samverkan är gemensamt så är målet både delat och gemensamt. Det gemensamma handlar om att kombinera undervisningsnära förbättringsarbete med en praktikinära studie.

Utgångspunkten för den studerade samverkanspraktiken är ett ömsesidigt intresse som inte grundas i ett formulerat uppdrag eller specifika förväntningar (jmf. Olin & Ingerman, 2016). Forskarna i den aktuella studien har på eget initiativ och intresse för närhet till undervisningspraktiken, och via lärledarnas och även rektors positiva bekräftelse, hållit kvar det historiska, men som numer kan betraktas som formellt avslutat. Ur ett perspektiv kan forskaren bidra med en fördjupad vetenskaplig grund, omvärldsspaning och analys, kontakter vid planering av dialogkonferenser, granskning av resurser för lärgruppsarbetet, således både en forskningsgrundad och en mer administrativ roll på grund av sin position och sitt uppdrag som forskare. Dock kan det finnas utmaningar med idén om praktikinära forskning. De utmaningar som kan identifieras i studien handlar inte om motsättningar avseende maktförhållanden, kultur, tid, ägarskap eller ledarskap (Day & Smethem, 2010). Det saknas inte heller kunskap och förståelse om yrkesutbildningens praktik (Alvunger & Trulsson, 2016). Det som kan identifieras som utmaningar är för det första forskningens mer långsamma processer där ett behov i undervisningen relativt snabbt kan förändras över tid, dels på grund av lärares aktiva handlingar, dels på grund av behov som "överskuggar" en beslutad plan. Här kan en kollegial samverkan mellan lärledare och forskare hamna i otakt. Det kan således finnas en begränsning i vilka typer av praktikinära frågor ställda av lärare som forskare kan ta sig an. Vidare kan en praktikinära studie kräva mer av praktikinärhet, än att den grundas i praktikens, lärares, frågor och behov. Forskningen kan möjligen störa en pågående process i lärgrupper eller i annat kollegialt arbete (Bevins & Price, 2014; Olin, 2019). Det finns också en utmaning med finansiering av praktikinära forskning där tiden mellan ansökan och beslut är lång, eller där forskare behöver dela sin tilldelade tid mellan olika projekt för att därigenom bidra med forskningsaktivitet, samt främja både det egna lärosätets forskningsproduktion och egen etablering i den akademiska miljön. En fråga är därmed hur lärare kan bli mer aktiva parter i praktikinära studier som grundas i lärares egna frågor. Ett

troligt framtida scenario är att på en metanivå undersöka praktiktäna forskningsprocesser och dessa studiers betydelse för utbildningen. Här är det givetvis väsentligt att yrkesutbildningens unika konstruktion och krav utgör exempel.

Det andra diskussionsområdet som studien aktualiserar handlar om undervisningsnära förbättringsarbete på vetenskaplig grund och via beprövad erfarenhet (Bergmark & Hansson, 2020; SFS 2010:800, 3 kap. 10 §). Även om utbildningens vetenskapliga grund inte är ett nytt krav, så har den under en tid utgjort en typ av kvalitetsmärkning tillsammans med andra förutsättningar som har aktualiserats i samband med sjunkande resultat och andra utmaningar (Hirsh & Segolsson, 2019; Jarl m.fl., 2017).

Det aktuella rektorsrådets historia och organisation med lärgrupper och lärledare har skapat en stabilitet. Studiens resultat uttrycker ett ömsesidigt förtroende och en gemensam förståelse för det kollegiala arbetet hos lärledare och forskare (t.ex. Edwards-Groves & Rönnerman, 2012; Frost & Harris, 2003; Muijs & Harris, 2003). Tolkningen är att kvalitetsarbetet grundas i en stabil organisation, med en tydlig plan och en systematik, något som kan benämnas som en kultur, där även forskare ingår som en naturlig aktör i en ömsesidig samverkan (Bevins & Price, 2014; Jahnke & Hirsh, 2020). De aktiviteter som beskrivs tar på olika sätt stöd av eller använder vetenskaplig grund. Mot bakgrund av tidigare studier om välfungerande systematiskt kvalitetsarbete (t.ex. Jarl m.fl., 2017), så är det aktuella rektorsrådet ett gott exempel. Lärledaren planerar, leder och utvärderar arbetet i lärgruppen. Detta kan jämföras med rollen som förändringsagent med mandat att leda förbättringsarbete (Blossing, 2013). Forskare bidrar med stöd och förslag på strategier samt olika former av forskningsaktivitet, men får också insyn i en pågående yrkesutbildning och lärares arbete (Bruce m.fl., 2011; Cheng m.fl. 2012; Olin m.fl., 2021), vilken anses vara en nödvändighet för en forskare som ägnar sig åt praktiktäna forskning. Frågan är dock hur den vetenskapliga grunden kan bli ett naturligt perspektiv i en lokal skolutveckling. Forskningen och forskare är till för samhällets behov av kunskap. Praktiktäna forskning, eller möjligen praktikutvecklande forskning (SOU 2018:19), ska bidra med vetenskaplig grund och vid undervisningsnära förbättringsinsatser. Samtidigt kan frågan om forskares och forskningens stöd för att stärka vetenskaplig grund i ett förbättringsarbete behöva problematiseras (Bergmark & Hansson, 2020). När kan en skolas organisation med vetenskapligt grundad skolutveckling "stå på egna ben"? När behövs forskaren för att tillgodose vetenskaplig grund i undervisningen, och på vilket sätt skulle en sådan samverkan i så fall kunna arrangeras? I föreliggande studie ställs inledningsvis några frågor som kan kopplas till rollen som lärledare respektive forskare i en skolas utvecklingsarbete på vetenskaplig grund. Studien kan ge ett visst bidrag till hur utbildning och

forskning kan förenas, men reser också frågor om utmaningar. Hur kan vetenskaplig grund formas i och forma en samverkande praktik?

Studien är praktiktäna genom att den studerar en pågående process där bakgrund och syfte dock har formulerats av forskare. Teorin om praktikarkitekturer har varit användbar genom att den inte analyserar individer, utan i stället praktiker och projekt (Kemmis & Grootenbauer, 2008; Rönnerman, 2018). Data består av tal och text och utgörs av det som har varit möjligt att samla information om under en interaktiv process. Studiens tillförlitlighet kan diskuteras med anledning av att en av de forskare som medverkar i samverkan även är ansvarig för artikeln. Detta utgör dock ett exempel på en forskares naturliga roll eller snarare roller i en samverkan för undervisningsnära skolutveckling och praktiktäna forskning.

Om författaren

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From gaps to transaction: Reflections on a long-term collaborative research practice in VET

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Abstract

The purpose of this article is to reflect on and theorise collaborative research practices. Research–practice collaborations are widely recognised and encouraged by means of university strategies, policy intentions, and funding requirements. One way to provide for and strengthen collaborative research in education is to form long-term partnerships between schools and universities. In this reflective account, we draw on our own experiences from doing research in the field of vocational education and training (VET) as participants in a long-term collaboration among two social and health care vocational colleges and two university departments. Assisted by Dewey’s pragmatic approach to learning as transaction, we seek to move beyond the binary of ‘research’ and ‘practice’ as constituting a gap to be bridged between two forms of knowledge. Instead, we conceive of the collaboration as an emerging ‘third context’ in its own right created by various activities, all of which involve both theoretical and experiential knowledge.

Keywords: collaborative research, pragmatism, social and health care education, transaction



Introduction

The introduction contains two sections. First, we introduce the collaborative agenda as it has influenced qualitative research in general, and more specifically the research fields of education and vocational education. Collaborative research is often regarded as a matter of transferring knowledge and overcoming a gap between two contexts: research and practice. Second, guided by the term 'transaction,' we question this division and suggest an analytical shift to the research-practice collaboration as an always-emergent third context in its own right. The introduction ends with the research question and an overview of the remaining part of the article.

The collaborative research agenda

Inter-organisational collaboration between research institutions and the surrounding community is increasingly perceived as a key factor in developing knowledge and solutions applicable in coping with the immensely complex problems of our time. Especially the field of university-industry collaboration has developed exponentially (Anand, 2021; Brix, 2017), as the ability to engage in collaboration is key to becoming and remaining relevant in a world of increased complexity (Fritz, 2019; Volberda et al., 2021). Consequently, the transfer of knowledge between organisational contexts and the overcoming of collaborative barriers have been researched intensively (Bjerregaard, 2009; Es-Sajjade, 2019; Lane & Lubatkin, 1998).

Recently, the umbrella term 'co-production' has become popular, pointing to various processes of knowledge production in the midst of action (Bell & Pahl, 2018). It is beyond the scope of this article to outline the many forms and concepts associated with collaborative and co-created research, but the call for collaboration is often raised to challenge power hierarchies and pay tribute to experiential knowledge, for example by involving a variety of participants in the co-design of research projects and the co-production of knowledge (Kelemen & Hamilton, 2018). According to Russ et al. (2024), qualitative research is increasingly moving towards engaging participants in research processes as equal collaborators; they point out that many qualitative researchers seek to create authentic research partnerships between researchers, professional practitioners, and people with lived experience.

The question of how research can enhance the quality of educational systems and support professionals has been a focus of educational research discourse and research programmes for decades. An example hereof is the work of Hargreaves (1999) and his notion of the knowledge-creating school in which especially teachers and headmasters, but also students, become creators of professional knowledge (see Paavola et al., 2004). Collaborative research in education is

designed to involve and to further develop the perspectives and knowledge of researchers, educators, and sometimes policy makers and stakeholders (Farrell et al., 2022), and in the field of vocational education often also of internship organisations (Choy et al., 2020). Accordingly, participants in a research–practice collaboration may be employed at universities and other research institutions, in state or municipal agencies, local schools or colleges, or stakeholder organisations (Farrell et al., 2021). They may also be citizens with experience as users or relatives within the empirical field of research (Fuller et al., 2018).

Within the field of vocational education and training (VET), inter-organisational collaboration has also attained increasing interest. Here, research has especially delved into the question of how collaboration between schools and workplaces can contribute to relevant vocational education (Hiim, 2023), the mechanisms fostering a connection between learning in school and workplace (Sappa et al., 2018), and how to develop fruitful learning environments in the workplace (Mikkonen et al., 2017). The popularity of collaborative research in VET education is also evident in policies and funding mechanisms. Among many initiatives, the European Erasmus+ programme (European Commission, 2024) illustrates the growing interest in establishing national and especially international inter-organisational collaborations between VET schools, as collaboration is a cornerstone in developing educational quality. Also, researchers have increasingly delved into the potentials and pitfalls of increased inter-organisational collaboration and how to transfer VET educational setup across national borders (Lin & Pilz, 2023). Sporadic research exists on how researchers and VET teachers collaborate on implementation of new innovations (Burchert et al., 2014).

Beyond the binary of research and practice

There is a broad consensus that it remains challenging to integrate research into organisational practice, a challenge often referred to as the ‘gap’ between research and practice (Mohajerzad et al., 2021). Mohajerzad et al. (2021) identify two streams of research, placing the responsibility on either research or practice: either the results of educational research are not sufficiently relevant and applicable (produced in seclusion from real life in the so-called ivory tower), or the conditions for the adoption and use of research findings are inadequate due to the lack of mechanisms for transfer from research to practice. According to Penuel et al. (2020), the increased attention paid to various kinds of collaboration can be understood as an ambition to bridge the research–practice gap by combining the two strands and focusing on the relations between research and practice in all phases of the research process.

Questions of societal relevance and power hierarchies have given rise to debates. Some encourage researchers to let go of their own epistemic authority

and allow knowledge to emerge by being radically open and vulnerable (e.g., Rhodes & Carlsen, 2018). While this may be the way forward to collaborative research on equal terms, there is also a risk that researchers refrain from investing valuable knowledge – experiential or theoretical – in the collaboration (Wegener, 2021). Others criticise the collaborative agenda for subordinating the university to the needs of the market economy, whose parameters are finance based and under an imperative to produce ‘fast knowledge’ and ‘fast publishing’ (e.g., Peters, 2014). These references are just examples to illustrate fundamental concerns rooted in a separation of ‘research’ and ‘practice.’ Turning the hierarchy on its head and arguing that the value of research is to be assessed by its immediate societal impact does not question this separation (Wegener, 2021).

Rather, there is a need to rethink knowledge, as we attempt to do here, in binary terms as either theoretical or experiential, and to reassess the value of the knowledge produced in terms of either academic or societal impact. In this, we conceive of research–practice collaboration as ‘transactions’ (Dewey, 1933). ‘Transaction’ is a central term referring to the reciprocal influences of individuals and their contexts in which the context, with its activities and material and discursive elements, always overrides the individual participant as the unit of analysis (Dewey & Bentley, 1949; Elkjaer, 2003). From this it follows that we shift analytical attention away from individual research participants representing either ‘research’ or ‘practice’ and conceive of the research–practice collaboration as an emergent new practice created by activities all of which involve both theoretical and experiential knowledge. We thus seek to move beyond the notion of research and practice as two distinct contexts constituting a gap that must be bridged, as illustrated below.

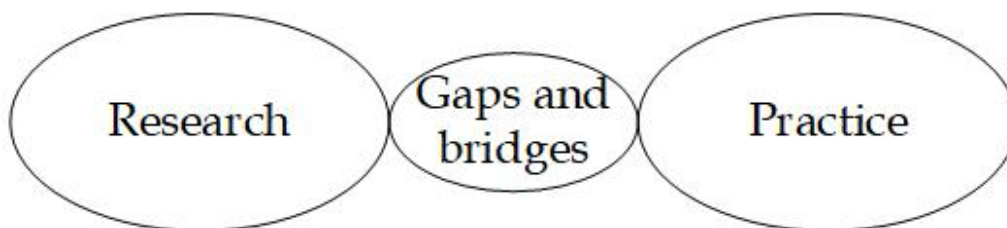


Figure 1. Research and practice as two separate contexts constituting a gap to be bridged (developed by the authors).

Instead, we place transaction centre stage and pay attention to the mutually constitutive relationship between individual participants and their social and material environment. Accordingly, we ask:

How do the terms 'transaction' and 'the third context' lend themselves to reflections on a long-term collaboration among two VET colleges and two university departments?

The article is structured as follows. First, we briefly state the rationale of our reflection. Second, we elaborate the pragmatic theoretical inspiration and the terms 'transaction' and 'the third context.' Third, we present the collaboration among two social and health care colleges (VET) and two university departments in which we are involved and describe three stages toward greater formalisation of the collaboration, which starts out as a loose network, is transformed into a formal partnership and then further into a well-established research centre. Next, we reflect on the collaboration as a third context, and finally we make some concluding remarks.

Method

In this section, we explain how Dewey's pragmatic notion of learning has inspired us to move beyond the binary of 'research' and 'practice' and suggest this to be an example of 'pragmatic theorising.' The second part is a personal reflection on the process of writing this article, which pushed us to inquire into our own collaborative learning as co-authors.

Pragmatic theorising

In this reflective account we draw on a long-term collaboration among two social and health care (SOSU) colleges and two university departments in Denmark, where social and health care training programmes come under vocational education and training (VET) (Randers Social- og Sundhedsskole, 2024; SOSU Østjylland, 2024). We use Dewey's (1933) pragmatic notion of learning and collaboration as transaction, as with a pragmatic approach it becomes possible to place the collaborative activities centre stage and thus move beyond the binary of 'research' versus 'practice' and 'theoretical' versus 'experiential' knowledge. In so doing, we conceive of the collaboration as an emerging 'third context' in its own right (Thomassen, 2013, 2024).

In this endeavour, we suggest a dissolving of the 'research' versus 'practice' binary and conceive of research as a practice. For want of another vocabulary, however, we refer to participants employed in welfare organisations (VET colleges and municipalities) as 'practitioners' and to participants employed at a university as 'researchers.' In practice, however, some individual participants are both, for example because they (as is the case with the first author of this article) have had a long career as a teacher or educational consultant before their employment at a university, or because they are employed part-time at a college and part-time at a university.

The method we use can be termed ‘pragmatic theorising’ (Styhre, 2022). Theorising as a verb indicates that inquiry is tentative and ongoing as a meaning-making procedure that proceeds from common-sense descriptions and re-descriptions of empirical events gradually connected to theory. As is the case with this article, we do not suggest a final and firm framework or an indisputable conclusion. As Styhre (2022, p. 8) puts it, ‘in the pragmatist perspective, skillful theorizing is re-examined as the capacity to align what Latour (2004) calls matters of joint concern, empirical material, and the semantics of everyday language so that the empirical material become meaningful in the eyes of the theorizing scholar, and thereafter for audiences.’¹

Reflections on writing this article

Having read the call for this special issue, we were sure: we would like to participate with an article reflecting on how the collaborative research centre was established, and not least the obstacles and possibilities we as researchers experienced during the process. We had worked together for more than 4 years, and we could easily write about this – or at least we thought it would be easy. However, the writing process turned out to be more tortuous than expected, and maybe our pre-understanding of ‘we can easily write this’ became a trip-up, which we did not recognise at first, but which became increasingly visible during the writing process.

Wegener had worked with social and health care education in various positions before entering academia, whereas Thomassen entered the field as the research network was initially being established. We knew each other when we began the writing process, and we had participated in and experienced how the network developed into a centre. Suddenly we felt puzzled: why did the writing of the article not flow as expected? Inspired by Dewey’s pragmatic thinking, we had to inquire into what was going on. We had not foreseen the explorative reflective journey we were about to enter; however, it has brought new insights. Next, we present some of them.

During the 4 years, we had gained new insights and new experience – however, we had only shared them sporadically. Writing the article meant that we had to explain our experiences orally and on paper – somehow the experiences became less detailed and less nuanced. In addition, experiences went from inside each of us to being something we shared. In collaboration, we inquired into the shared experiences, a transactive process which over time gave us new insight into how the collaborative network was formed and new personal understandings of the many actions, changes, and experiments we had participated in – we experienced the process of transaction ourselves. In retrospect, by initiating the writing of this article, we initiated a third context.

By coincidence, pragmatism and practice theory have been the theoretical inspiration for the researchers who have followed the journey from network to centre. We did not pay much attention to our overlapping theoretical approach – perhaps because it did not puzzle us. The writing process has made us curious about the implications of our theoretical inspiration and how we *jumped into* collaborative network possibilities where neither the process nor the result was clear from the beginning. Hence, the writing process has pushed us to inquire into our actions and experiences, and this provided new insights – insights which we did not have beforehand.

Research collaboration as transaction

To understand the idea of collaborative research practice through a third-context lens (Thomassen, 2013, 2024), we draw on philosopher and educator John Dewey's (1859–1952) conception of learning as practices of critical and reflective thinking with the aim of being able to act in an increasingly informed and intelligent way in the world (Dewey, 1933; Elkjaer, 2004). According to Dewey (1938), learning arises from reflection on experience. Experience is more than what happens to us, and more than simple participation in an activity. Experience involves interaction and even *transaction* in which everyone and everything involved is affected and changed. Transaction happens in discussion or collaboration, in ongoing movement between people, ideas, material or whatever a given situation consists of (Dewey & Bentley, 1959). Precisely this, that an experience consists of transaction between a person and their environment, implies that not only the person, but also the current environment, changes. We do not just change the world; it also changes us. Or, if taken slightly further, we (as human beings) are not *in* but *of* the world.

The second part of experience is continuity. According to Dewey, continuity involves the way in which we create meaning from each new experience with the help of our previous experiences and other knowledge (others' experiences, ideas, and material) about the world. Interaction and continuity are the X and Y axes of experience (Rodgers, 2002). Without transaction, learning is passive and will not really be able to change the learner. Without continuity, learning will be haphazard and fragmented, and it will not really target anything either in the world or in the learner. If we connect Dewey's ideas about experience to collaborative research, the third context develops through mutual change of everybody and everything involved. The key is to create opportunities for interaction and continuity – that is, for experiences (Dewey, 1916).

The term 'the third context' (Thomassen, 2009, 2024) is relevant as, due to its pragmatic inspiration, it rejects the binary of research and practice (Dewey, 1933). Hierarchy between the two is of no interest; of interest is how learning unfolds,

and how new knowledge is developed through transaction. The pragmatic stance that our being in the world is fundamentally social implies that social contexts occur as collaborations are established and unfold. Much research on collaboration between researchers and practitioners focuses on collaborative characteristics enhancing or impeding learning and problem solving; unfortunately, collaboration as learning processes is overlooked (Thomassen, 2024). The term 'the third context' supports a view of collaboration as mutual engagement in learning processes, that is, how to develop a research collaboration, thereby offering a processual approach to collaborative research (Thomassen, 2011, 2024).

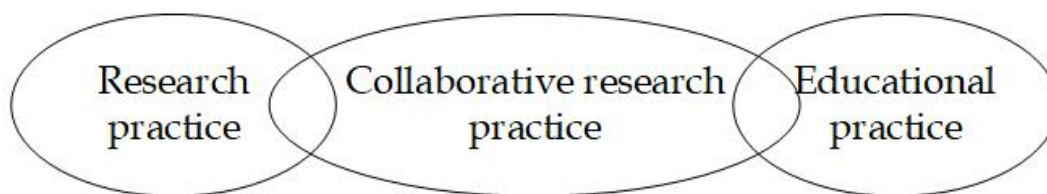


Figure 2. *The third context* (Thomassen, 2009, 2013, 2024).

The above figure of the third context illustrates that researchers and practitioners bring knowledge, experience, and practices into the new social context, which develops as actions unfold. Collaboration is transaction providing the opportunity for researchers and practitioners to bring experiences into play in the process of inquiring into puzzling questions and situations (Dewey, 1933). Situations being puzzling does not necessary imply that this is problematic; it might also be a surprising opening of new possibilities. Of interest is how mutual engagement can lead to new ways of action, and the third context thereby transcends the theory–practice gap.

Now follows a chronological presentation of the collaboration, followed by a description of how selected activities constituted the development of the collaborative practice.

Development of a collaborative research practice

The initial organisational participants of the collaboration were two social and health colleges and two university departments. We will now present the development of the collaboration in terms of three stages of formalisation termed 1) the network, 2) the partnership, and 3) the centre.

The network (2018–2020)

The initial steps of networking were taken before anyone was aware that a network was about to emerge. For several years Wegener had worked at a social and health care college as a teacher and later as Head of Education. Still an employee at the college, in agreement with the Principal and the Head of Research & Development (R&D), she applied for and received funding for an industrial PhD project. After her degree, Wegener was employed at the university but maintained close collaboration with the college during various externally funded projects. In 2016 the other social and health care college enrolled their pedagogical leader as a doctoral student at another university department, where Thomassen worked as an associate professor. A couple of years later, the college where Wegener was associated co-financed and employed a doctoral student with Wegener as supervisor.

Each college now had a doctoral student. Following conversations between the heads of R&D at the two colleges, the idea of establishing a research network developed. The intention was to provide a community for the doctoral students who were pursuing their studies at two geographically close colleges and to explore the potential for developing future research activities together. At this stage, the network comprised the two doctoral students and Wegener. Their networking was encouraged by managers at the university and the two colleges, but with no economic or administrative support other than the two financed doctoral positions.

The partnership (2020–2022)

After defending their dissertations, both doctoral students were employed in positions shared between the university and the social and health care colleges. Simultaneously, the research activities increased and Thomassen, who was employed full-time at the university, became part of the network. During 2020, numerous discussions took place between managers at the two colleges and the two university heads of department. The concern was primarily how to develop a partnership suitable for developing further research activities. After approximately 6 months of dialogue, a formal partnership agreement was signed by the two social and health care colleges and the two university departments. During this stage, the four researchers carried out a scoping review of existing research on learning in social and health care education in Denmark (Møller et al., 2021). The review confirmed what we had already experienced in practice: that social and health care programmes are underrepresented in VET research. It also revealed a lack of collaborative research and a tendency to position social and health care colleges as research objects rather than as co-creators or collaborators. The managers of the colleges were intent on enhancing the agency and power of the colleges as research partners. The partnership organised the

first Danish research–practice conference and created a format for national researcher–practitioner gatherings for practitioners, researchers, and stakeholders in the field of social and health care education. The activities were initiated and run by the four researchers and supported by the heads of R&D at the SOSU colleges and by the university heads of department. Shortly after the partnership agreement was settled, a discussion developed regarding the relevancy of turning the partnership into a centre. The discussion was initiated due to an increasing number of activities, increasing interest from external stakeholder organisations, and not least increasing public and political interest in vocational education and training (VET).

The centre (2022–present)

The intention behind establishing a centre (FoCUS, 2024) was to strengthen the organisational foundation for the many activities mentioned above and boost the visibility of social and health care education, both as a research field and as a major but often ignored part of the Danish VET system. We (the researchers) had obtained a couple of new research grants, and we had received many enquiries from researchers at other universities and project managers at other social and health care colleges who wanted to know about our work and the possibility of participating in collaborative activities. Establishing a centre signalled increased commitment and provided infrastructure for developing new activities. Developing from a partnership to a centre required many rounds of negotiation regarding roles and obligations, as each organisation saw itself as having more at stake. For example, the wording of the legal contract had to leave no doubt that the university had full responsibility for the centre’s research output, because a vocational college is not legally defined as a research institution. Alongside these negotiations, the activities continued and expanded to include a website with a newsletter, facilitation of a network of associated members, and a podcast series. The two social and health care colleges financed the management of the centre and allocated time for administrative staff to assist with communication and practical matters. Research activities were financed from external funding. Below is an overview of the development of the collaboration.

Table 1 provides an overview of the degree of structure, formality, and legitimacy of the work done in the collaboration. What becomes obvious from the table is that the network and the partnership were short-lived transitional phenomena. The informal network soon became a formal partnership, and negotiations to establish a centre started soon after the partnership agreement was signed. Recently, two researchers from two other Danish universities have joined the centre as collaborative partners due to overlapping research interests.

Table 1. Three degrees of formalisation (developed by the authors).

	The network 2018–2020	The partnership 2020–2022	The centre 2022–?
Degree of formalisation	Oral agreement on a shared interest in research	Partnership agreement on aim, vision and mission	Legal signed contract describing roles and responsibilities
Organisation	Unstructured	Collaboration between Heads of college and university department	Formal steering committee
Meeting formats and sequences	Occasional meetings	Fixed meeting sequence	Development of meeting formats
Communication	Individually	Occasional newsletter	Webpage and newsletter
Research activities	Based on individual interests	Initial collaboration between partners	Collaboration with external researchers and organisations
Funding efforts	Based on individual engagements	Partners bring own funding into the collaboration	Outline of a funding strategy
Dissemination	Individually	Initial collaboration between partners	The centre is a lever for dissemination

Network activities as collaborative practice

In the following we present the three categories of activities that constitute the collaborative practice, all of which involve both experiential and theoretical knowledge.

Research

Research activities hosted by the centre have a learning perspective in common, but involve diverse research communities within pedagogy, didactics, innovation, workplace learning, cross-organisational learning, and management.

Besides working with research questions related to societal challenges and theory development, a common feature of the projects is an interest in exploring collaborative research methods and co-productive approaches. In the transformation from network to partnership, we established a vision of doing research not 'about' but 'with' people (Russ et al., 2024). As the collaboration developed and more participants joined, the 'learning perspective' and the 'research with' methodologies became our guidelines and inclusion criteria when choosing which activities or research projects to pursue. Emphasising a learning perspective was (and is) important, because social and health care education is well researched and well evaluated, but mainly from perspectives of *lack*: during our work on the scoping review we found ample applied research and evaluation reports, for example on drop-out, vulnerable youth, actual and future understaffing, and sick leave among social and health care professionals (Møller et al., 2021). We acknowledge the importance of all these areas; however, the 'research with' mantra supports much more nuanced questions. And what is profoundly underrepresented in both policy and public rhetoric and in research concerned with social and health care is a *resource* perspective.

Communication

Besides initiating and hosting research projects, the centre acts as a forum for collecting, disseminating, and exchanging knowledge of relevance to social and health care research, policy, and educational development. The centre runs a website and a newsletter presenting new collaborative projects and partners, invitations to future activities, and photos and materials from past activities. The site also features peer-reviewed publications from national and international journals in one section and another section for publications in popular outlets, debate, and opinion pieces. The centre has launched a podcast series, each episode featuring a theme (e.g., management of learning, learning through simulation, a learning perspective on innovation) in dialogue between one guest representing a perspective from education/work practice and one representing a research practice, facilitated by a journalist. Hence, the intention of integrating research and practice is also constituted in the design of the podcasts. Moreover, every 2 years, the centre hosts a national conference which attracts over 150 participants, a mix of researchers, educators, policy makers, and volunteers.

Network

The centre hosts a researcher-practitioner network to which everyone with an interest in the field can sign up on the website. The aim of the network is to create infrastructures for new contacts and dialogue. The network acts as a knowledge base where members can seek new collaborative partners for projects, exchange information, and find experts on specific topics. The network participants are

from all organisational levels across colleges, welfare practices, and research institutions involved in social and health care education and learning. Participants from other types of VET education have also found their way to the network, expressing a need for learning across vocational fields.

The centre runs two annual workshops for anyone interested in research and educational development. The workshops are organised around a keynote and short presentations from ongoing or finished research or development projects, alternating with facilitated dialogue in groups. As such, each workshop features a theme of mutual interest (e.g., recruitment, learning communities, research in practice) but, just as important, provides a repeating and recognisable (infra)structure within which new networks can evolve among participants. This may be between researchers and practitioners, but also between, for example, employees from different municipalities. The workshops are hosted around the country at different research, educational, or municipal locations to make the network meetings as accessible to as many as possible. However, the material and discursive elements are always the same: a table plan mixing participants, a keynote, facilitated dialogue in groups, lunch, shorter talks, a second round of facilitated dialogue in groups, summing-up and conclusion by a host, and, within no more than a week, a newsletter summing up impressions, ideas, and insights from the day is distributed.

The third context: Reflections on the collaborative research practice

By applying the third context as the analytical lens, we next engage in a reflection on our experiences of how the collaborative research practice has developed. What makes this collaborative research network unique is that Wegener participated even before anyone saw it as a network. It illustrates the fact that collaboration often develops merely by coincidence rather than on purpose. The initial discussions between Wegener, the two PhD students, and the two managing directors were based on a common interest in research. It is important to note how the collaboration was initiated, because researchers and practitioners often collaborate in a pre-defined project to solve a pre-defined problem (Anand et al., 2021; Bjerregaard, 2009). Instead, curiosity and ambitions on behalf of social and health care education were the origin and formed the germ of the action-oriented way of collaboration. As will be seen below, this core interest has greatly influenced how the network collaboration has developed.

Reading through the description of the three phases (network, partnership, and centre), it becomes apparent on the one hand that management at the two university departments and the two social and health care colleges has a very clear and strong influence on the steps from network to centre, and on the other that it is loosely coupled to the researchers' activities. During the initial steps of

the collaboration, the managers of the two social and health care colleges were invited to participate, illustrating the assumption that if we are to collaborate, we need managerial buy-in. Subsequently, university and college management met to discuss collaborative possibilities, thereby initiating what can be described as a managerial third context – at first a fragile construct, but becoming more solid as the negotiations regarding the different phases took place. The management level was first and foremost interested in creating a balance between each of the four organisations' interests and the researchers' opportunities to develop research activities. Over time, the transaction unfolding in connection with negotiations of the network, partnership, and centre formed a (managerial) third context.

The pace of formalisation illustrates that the collaborative research network is not *only* formed by actions within the network – societal changes and agendas are translated into a managerial understanding of urgency for formalisation, illustrating how the managers bring experience from other social contexts into the research collaboration. Worth noticing is that increasing formalisation seems to entail increased focus on the wording in legal documents, somehow reducing the experimental curiosity which also characterised the managerial level in the beginning. The intention behind increased formalisation was good, but sometimes good intentions create unintended tensions. Thus, it is worth considering which instruments (e.g., formalisation) are brought into the transactional processes, as in this case formalisation triggered a gap between research and practice which required lengthy negotiation.

As mentioned, curiosity and ambitions on behalf of social and health care education originally brought the researchers together – and as previously described, we brought different experiences into the network. At this stage, our collaborative research practice (understood as the third context) was rather fragile, as limited action had unfolded up to that point. In this early phase we did not have a clear picture of what a collaborative research practice was or how to create it; we knew that we wanted to conduct research in close collaboration with stakeholders, and we wanted to cross the theory–practice gap. This objective became our lens, or as Dewey (1933) would say *our tool to think with*, through which we engaged in an inquiry as to how to develop the network.

Subsequently, several activities were initiated to gain new experiences that we could use in the future development of the collaborative research network. Some of the activities were initiated due to external possibilities: for example, the faculty of Social Science and Humanities provided seed money for a small research project, whereas other activities were initiated due to a common strategic decision. Behind these decisions were multiple discussions influencing the transactional development of the network. The decision to make a scoping review became a milestone in the network's development process, as all

researchers were focused on the same task, thereby developing the collaborative connections. Further, the published review became an artifact/tool in our engagement with different external collaborative partners, implying that the review illustrated our research interest and thereby the research network's characteristics. Hence, the review was integrated into the transactional processes, leading to a stronger internal and external profile.

Besides the literature review, several activities were initiated, as previously described. Today, it looks as though it had been settled from the start that the activities would be divided into three groups: 1) research, 2) communication, 3) network. However, this was not the case. The three categories developed tentatively over time as we initiated different experiments – hence, action was the main driver in forming the activities. In this regard it is relevant to note the vision informing the actions, namely the intention to bring researchers and practitioners together and create new knowledge with the objective of developing social and health care education. It would have been perfectly fine only to establish a collaboration between the two university departments and the two social and health care colleges – the intention of collaborative research would have been met. However, the vision of collaboration between researchers and practitioners was also soon transformed into other collaborative formats. It is notable that in the research network we initiate new types of third contexts with other actors, organisations, and stakeholders. All the activities are based on the assumption that by bringing people with different experiences together (participation), new inspiration and knowledge emerge, and all participants are acknowledged as experts.

The various activities do not only create new relationships among researchers and practitioners; the activities also contribute to our developing a better understanding of ourselves as a network and as collaborative researchers. As individual researchers and as a research team, we are transformed as the network transforms. The role of researcher expands as more and more activities are incorporated into the network. Transaction due to the increased number of activities means that the network, understood as a third context, is growing more and more established.

Beyond binaries: Further reflections

We have initiated a reflection on a research–practice collaboration as ongoing transaction and as an emerging 'third context' by presenting three kinds of activity (research, communication, and network) which cannot be delineated as either 'research' or 'practice.' All three kinds of activity use and produce both theoretical and experiential knowledge. We assume this applies to most research practices. Nevertheless, the notion of two distinct contexts constituting a gap that

must be bridged is prominent. The distinction also seems to be the underlying premise in the discussions as to which knowledge forms come first or are at the top or bottom of power hierarchies as discussed by, for example, Rhodes and Carlsen (2018), Peters (2014), and Kelemen and Hamilton (2018), although with differing conclusions and suggestions. Abandoning the binary of 'research' versus 'practice' and inquiring into our own experience, we have worked with the hypothesis (Elkjaer, 2018) that the first and second contexts (the research context and the practice context, leaving unaddressed the question of which is the first and which the second) do not *exist* a priori but are *produced*. The first and second contexts are not static but mutually constitutive and changing as the third context evolves. Moreover, there are also a municipal context, a political context, and so on. Focusing attention on the 'middle' allows for metaphors other than 'gaps,' 'bridges,' and 'translation.' Here we have experimented with 'transaction,' but we trust that non-dichotomic metaphors are plentiful.

Other conceptual models are in line with Elkjaer's (2004) suggestion that we combine acquisition and participation approaches to account sufficiently for novelty. For example, Paavola et al. (2004) note that the acquisition and the participation approaches have in recent years been revised to deal with innovation. They analyse three influential models of innovative knowledge communities: a) Ikujiro Nonaka and Hirotaka Takeuchi's model of knowledge creation, b) Yrjö Engeström's model of expansive learning, and c) Carl Bereiter's model of knowledge building. The authors propose that all three can – despite variations – be understood as a third approach to learning that incorporates innovation; they call this a 'knowledge-creation' model of learning. We find that a knowledge-creation perspective on collaborative research practices resembles core ideas found in social innovation literatures and suggest that further studies into collaborative research may benefit from a social innovation perspective (Wegener et al., 2023). The term 'social innovation' involves changes in social relations, new ways of organising, framing, doing, and knowing (Avelino et al., 2019) and is hence closely connected to the everyday work practices where professionals interact, reflect, and carry out their work (Haapasaari et al., 2018). Moreover, it is often emphasised that for social innovation to evolve, professionals must have the opportunity to engage in collaboration and learning across professional and organisational contexts (Sydelko et al., 2021) and not least acknowledge and engage with the experiential expertise of users, clients, and patients (Fuller et al., 2018).

According to Dewey, continuity involves the way in which we create meaning from each new experience with the help of our previous experiences and other knowledge – which may be other people's experiences, concepts, ideas, or material. Without continuity, learning will be haphazard and fragmented. Experience alone is not enough, according to Dewey. What is decisive is the

ability to perceive and 'weave meaning' around the threads of experience. Meaning arises when we create connections between the different elements of experience and knowledge available as the third context evolves. In our long-term collaboration, the three clusters of activities – research, communication, and network activities – can be understood as threads continually woven into each other, producing new meaning and attracting new collaborative participants with a variety of experiences and ways of inquiring.

Conclusion

To understand the idea of collaborative research beyond binaries, we have drawn on Dewey's conception of learning as practices of critical and reflexive thinking with the aim of being able to act in the world in an increasingly informed and intelligent way (Elkjaer, 2004). According to Dewey (1938), learning arises from reflection on experience. Experience is more than what happens to us, and more than simple participation in an activity. Experience involves *transaction* in which everyone and everything involved is affected and changed. Transaction happens in research projects, in communication and network activities as we have addressed above, in ongoing flows between people, ideas, material, or whatever a given situation consists of. For collaborative research, this means that the third context is not a place the researcher (or any other participant) can enter, leave, and re-enter. It is ongoing creation of learning grounded in past experiences and oriented towards the future.

Research that seeks to elevate various kinds of knowledge will involve new sets of participants in the collaborative processes of knowledge, state Kelemen and Hamilton (2018). However, as mentioned, we do not suggest that a reversal of hierarchies is the solution. Rather, we have found inspiration in Dewey's rejection of knowledge hierarchies and his processual approach to experience as being always in the making due to transactive processes, as something people do and say as they act amid the material world – which simultaneously exercises its influence on people.

We have initiated an inquiry into our long-time collaboration that moves beyond dichotomies of research versus practice and researchers versus practitioners, and which may contribute to the evening-out or dissolution of power hierarchies – of practices, people, and forms of knowledge (Phillips et al., 2019). This is not to deny power dynamics and hierarchies. In particular, we have found power dynamics between top-down and bottom-up processes to exercise their influence. However, we find that abandoning the 'gap' and constructing the unit of analysis in the midst of collaborative practice assists ongoing attention to the co-creative aspects of learning and to forms of value that can be both societal and academic.

VET education may be particularly interesting and inspirational in this endeavour, because it already operates in a collaborative or co-creative space between a college context and a workplace context as students alternate between school-based learning and internship training. Accordingly, a collaborative research practice concerned with VET always already involves workplaces and potentially municipal and national policy practices along with stakeholder and interest organisations, the media, and more. A next step in theorising collaborative research practice in VET may be to further map and inquire into *activities* as the unit of analysis.

Endnote

¹ Styhre refers to Latour, B. (2004). Why has critique run out of steam? From matters of fact to matters of concern. *Critical inquiry*, 30(2), 225–248.
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Vocational knowing and becoming in VET and VTE: How bringing them together can provide new insights for vocational pedagogies

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Abstract

This article addresses how vocational knowing and becoming are cultivated in vocational education and training (VET) as part of upper secondary and adult education, as well as in vocational teacher education (VTE). It is based on a study within a Swedish government initiative aimed at promoting the development of school-relevant research and educational practice in partnership between the academia and the school sector and draws on interviews with VET and VTE teachers. Our findings show that VET and VTE teachers share similar ideas of what a good teacher is and does, and how these qualities are cultivated through participation in various communities of practice. VET and VTE teachers also share ideas of what their students need to become skilled professionals. These ideas include critical judgement, the integration of theory and practice, ethical reflection, and the propensity to handle diversity and relate to *the Other*. We identify and discuss these as aspects of VET and VTE teachers' *vocational phronesis*. Implications for VTE include the need for supporting students' educational journeys, developing teachings strategies for vocational phronesis and reflecting on the purpose of education.

Keywords: vocational education and training, vocational teacher education, vocational knowing, vocational Bildung, practical wisdom, communities of practice



Introduction

It is well-established that there is a strong correlation between students' social background and their educational path (Beach, 2020; Bourdieu, 1990; Willis, 1977). For example, students with incomplete or low grades are often directed towards vocational education and training (VET) due to lower admission requirements, and more often have working-class background (cf. Panican & Paul, 2019). A complete upper secondary degree is critical for young people's employment, democratic participation, social inclusion, and health (Schleicher, 2018). It is further known that teacher competence is a key factor for student achievement (Johansson et al., 2023). Given this, we argue that teacher quality in VET is particularly critical for counteracting social reproduction and contribute to equalising students' life chances. But what is the core of 'good' teacherhood in the context of VET, and how is it cultivated, in vocational teacher education (VTE) and other contexts? In this article we address these questions from the perspectives of teachers in both VET and VTE.

In Sweden, VET is provided both in upper secondary school, as three year programmes comprising vocational and general courses, and in adult education as courses and shorter programmes (SNAE, 2024). VTE is a university-based teacher programme consisting of 60 ECTS of courses on, for example, learning and development, curriculum theory, assessment and grading, and research methodology. It encompasses 30 ECTS of practicum (Alvunger & Grahn Johansson, 2018). Entry requirements include validated expertise in relevant vocational subjects.

Previous research on upper secondary VET has mostly focused on policy and general subjects in VET (cf. Berglund et al., 2020; Isacson & Amhag, 2018; Wheelahan, 2015) and didactics in vocational subjects (cf. Kilbrink et al., 2023; Tyson, 2017; Wyszynska Johansson, 2020). Furthermore, Gustavsson and Henning Loeb (2018) acknowledge that previous research on VTE is sparse. This knowledge gap was specifically addressed in a special issue of the *Nordic Journal of Vocational Education and Training*, titled 'Challenges and Development in and of Vocational Teacher Education'. The included studies drew attention to, for example, the dominance of academic culture within VTE (cf. All et al., 2018; Dahlback et al., 2018) and the fact that VTE students need to be supported in developing critical thinking as well as integrating theory and practice (All et al., 2018). Duch et al. (2018) focused in their article on VTE teachers' professional development, concluding that this was connected to their personal biographies, and their meeting with students, as well as participation in collaborative development- and research projects.

However, the interlinkage between notions of vocational knowing and becoming in the context of VET and VTE has not yet received much attention in educational research. We hope to contribute to the field by highlighting this in

the context of publicly organised VET and VTE in Sweden. The article is based on data from a project (Conceptualisation of Vocational Knowing in three Communities of Practice) within a Swedish government initiative ULF (Utbildning/Education; Lärande/Learning; Forskning/Research), aimed at promoting the development of school-relevant research and educational practice in partnership between the academia and the school-sector.

The article departs from two research questions:

1. How do VET and VTE teachers conceptualise vocational teaching skills and capabilities?
2. What do VET and VTE teachers consider important in developing these skills and capabilities?

The results are subsequently discussed in relation to how VTE may benefit from these explorations of vocational knowing, becoming, and teaching practices in the context of both VET and VTE.

Previous research: Perspectives on vocational knowing and didactics

In the study, the concepts *vocational knowing* and *vocational becoming* serve as tools to understand how vocational skills are understood and cultivated. Previous research of importance for our study centers around tensions between the mere instrumental reproduction of knowledge vis-à-vis critical thinking in VET, teaching practices in VET, and how VTE teachers support their students' affordance of *Bildung* and *practical wisdom*.

Vocational knowing: Tensions between reproduction of knowledge and critical thinking

Lindberg (2003) discusses vocational knowing in terms of situated judgement in relation to a vocational language that represents the content of the vocation, be it ethics, tools, methods, planning, technique etc. Furthermore, vocational knowing is developed through experience, by acting in the social world as well as through education and instruction that support problem-solving and learning. Hence, and along with Billett (2001), vocational knowing becomes a question of becoming, combining knowing 'how' and knowing 'what'. As such it is an active, dynamic process dependent upon the individual engaging with the social world, beyond the self.

Several studies have found that the Swedish curriculum tends to reproduce class divisions between students attending vocational programmes and students

attending university-preparatory programmes (Korp, 2011; Nylund, 2013; Nylund et al., 2017; Rosvall, 2012). The vocational-academic divide in the Swedish curriculum has a long history and has been further reinforced by neoliberal policy. One example is the ideology of *New Public Management* (NPM), which has dominated the Swedish curriculum since the early 1990s, emphasising competition and employability (Nylund et al., 2017; Wahlström, 2015). Therefore, all teachers (regardless of what stage or upper secondary programme they teach) can be said to balance demands connected to measurement and standardisation on the one hand, and professionalism, that is, time to build relationships with their students, develop their teaching and engage in didactic discussions, on the other (Englund & Solbrekke, 2015; Wärvik, 2013).

Using Bernstein's (2000) modalities of knowledge, Nylund and Rosvall (2016) highlight that due to the organisation of educational content in the curriculum, VET students have less access to vertically organised knowledge. Within a vertical discourse, knowledge is organised through theory and concepts and inherently viewed as generic due to its capacity to connect various levels and meanings. Vertical knowledge can produce power, as well as critically put it into question. Horizontally organised knowledge, on the other hand, focuses on everyday experiences and is strongly related to a specific context in terms of right or wrong. Nylund and Rosvall argue that the dominant horizontal discourse connected to VET in the curriculum serves as a way of excluding VET students from participating in and affecting societal contexts, including that of their own vocation. Hence, VET students learn to adapt and do, while students in university-preparatory programmes learn to imagine and think (Nylund et al., 2017).

To come to terms with the focus on specific context-based skills in VET, Wheelahan (2015) proposes that students need to access different types of knowledge and cultivate the ability to distinguish between them, for example, being able to separate psychology from sociology or economics. However, context-bound knowledge from the workplace is also needed. Hence, VET students need to learn from both educational settings and workplace settings to navigate the boundaries between them.

Vocational knowing: VET teachers' teaching practices

The identities, teaching practices, and vocational didactics of VET teachers have been the focus of several studies. In Nylund and Gudmundson's (2017) study, VET teachers identified either as 'craftsmen' or as 'teachers'. Those primarily identifying as 'craftsmen' mainly emphasised knowledge connected to vocational culture which they perceived as somewhat disconnected from pedagogical issues and school-related knowledge. On the other hand, those identifying as 'teachers' tended to regard knowledge in terms of both vocational

culture and pedagogy, seeing it as intertwined with school culture. In the same vein, Fejes and Köpsén (2012) highlighted that VET teachers need to balance their teacher identity with their former occupational role and perceive practices and communities as integrated. Asghari (2014) found that VET teachers' experiences and life stories were closely connected to what they primarily regarded as important to teach and what kinds of relationships they formed with their students. Based on their own background, teachers supported and cared for students in various ways. Some by 'seeing' and 'hearing' their students, in school and outside, and some by instilling discipline or supporting the student's social development. Similarly, Antera (2022) found that VET teachers saw interpersonal aspects of teaching as important competences and a prerequisite to meeting students' needs. Moreover, Gidlund's (2020) study showed that both VET teachers and VET students found that relational pedagogy contributed to increased student engagement, motivation, and participation within the upper secondary school context.

Previous vocational experiences also serve as concrete didactic tools for VET teachers. Christidis and Lindberg (2019) exemplify how VET teachers emphasised everyday ethics and vocational ethics by using their own narratives and examples from practice. The teachers also acknowledged the students' personal experiences related to ethics by supporting argumentation and dialogue. However, when the teachers' input served as the only 'bridge' between school and work-based settings, these tools did not fully suffice to establish a connection to vocational knowing. Furthermore, Kilbrink et al. (2023) found that VET teachers use their vocational knowledge and experience in conjunction with the syllabus, transforming vague descriptions into subject-specific content.

Beyond the challenges of bridging the gap between school and workplace, Wyszynska Johansson (2020) found that certain types of feedback are of critical importance for VET students. If students receive non-specific feedback or lack tools for engaging in self-assessment, they are left alone to decide what performance qualities might be deemed valuable. To strengthen students' vocational identity and becoming, teachers need to engage in processual feedback that creates opportunities to conceptualise vocational content. Student-led feedback may on the other hand, according to Wyszynska Johansson et al. (2019), serve to strengthen vocational identity while it does not seem to have as much impact on their conceptual development.

Vocational teacher education: Vocational didactics, and practical wisdom

The ability to reason and to apply critical reflection and judgement is recognised as a vital aspect of VET teachers' skills and is therefore crucial for VTE. Concepts that have been used to capture these abilities are *Bildung* and *practical wisdom*. *Bildung* relates to personal biographies and the affordance of judgement through

education and training (Klafki, 2000) whereas practical wisdom refers to the ability to critically reflect on and evaluate actions in various contexts (Aristotle, 1970). How such reflections are carried out is a critical aspect within VTE. Investigating course syllabi in Swedish VTE, All et al. (2018) found that while written assignments dominated, tasks still reflected both academic and practical cultures, and to some degree demanded self-awareness and critical analysis.

Tyson (2017) exemplifies how elements of *Bildung* and practical wisdom can be strengthened in VTE. The examples include the use of case narratives or 'stories' that contain particularly rich descriptions of teaching, various ways of solving problems, or handling situations in the vocation. Such stories serve to highlight knowledge regarding vocational concepts and tasks, as well as to create a basis for critical reflection. Moreover, the use of narratives underscores the importance of describing various actions and occurrences in practice and their inherent variations and discrepancies. Other ways that have been found to support the growth of practical wisdom and judgement in VTE include allowing VTE students to analyse their own language and teaching strategies through video analysis and peer reflection. Such strategies serve as means for exploring new ways to organise teaching content, thus bridging the gap between theory and practice (Alvunger & Grahn Johansson, 2018). Examining VTE students' self-evaluation reports, Berglund et al. (2020) found that various arrangements within VTE can either enable or constrain students' ability to critically reflect on their teaching experiences. For VTE students to critically reflect on their teaching, a robust connection between learning in practicum and at the university needs to be established.

The result of Duch et al.'s (2018) study of Danish diploma education for vocational pedagogy showed that VTE teachers had different views on the purpose and nature of both VET and VTE and that these sometimes conflicting notions can be used as starting points for collaborative work to develop VTE. Regarding VTE teachers' own professional development, Duch et al. found that teachers saw their work to develop course and teaching methods and meeting students from different vocational backgrounds as well as their own personal biographies as important.

Theoretical framework

Our exploration of vocational knowing and becoming in VET and VTE applies a socio-cultural perspective, where learning is seen as embedded in cultural practices (Lave & Wenger, 2012). To explore how VET and VTE teachers describe vocational knowing and becoming (i.e., vocational skills, processes, experiences, and relationships) we apply the concept of *boundary crossing*. Boundary crossing occurs when professionals enter into contexts or situations that are somewhat

unfamiliar (Suchman, 1993) and therefore have to combine various contexts in order for them to be brought together (Engeström et al., 1995). Akkerman and Bakker (2011) identify four learning processes that are supported by boundary crossing: (1) *identification*, where defining one practice and how it differs from another can create space for legitimacy and co-existence, (2) *coordination*, through the development of efficient communication and routines, (3) *reflection*, where practices are compared and viewed from different angles, and (4) *transformation* in which a gap or a problem is confronted, leading to changes or adjustments in practice.

Aristotelian concepts of knowledge play an integral role in the study; *techne*, the knowledge of how to make or produce something correctly, using the appropriate technique and following rules; *episteme* knowledge in terms of 'truths' and theory, to know 'about', by contemplating or doing science; *phronesis*, practical wisdom, a type of knowledge sustained through an understanding that actions are always situated in various contexts that must be evaluated based on experience, judgement, and critical reflection (Aristotle, 1970; Kemmis & Smith, 2008). The concept of practical wisdom is of primary interest in the study since it provides a space where the gap between theory and practice can be bridged (cf. Kinsella & Pitman, 2012).

Practical wisdom is further conceptualised through the lens of Nussbaum's (2001) capabilities approach, where we have found the concepts of practical reasoning and affiliation (cf. Cockerill, 2014) especially useful in this study. Practical reasoning involves engaging in critical reflections on one's own life as well as conceptions of the 'good'. In turn, affiliation emphasises the importance of engaging with others, and to live, not only with, but towards others, imagining another's situation and showing concern for their needs (Nussbaum, 2001). Teaching and learning that support such capabilities are characterised by reflective practice, ethical questioning, and social action (given that some situations lack applicable rules, but still require action). This constitutes a complexity that needs to be accepted and dealt with by 'acting anyway', thus strengthening personal responsibility (Silfverberg, 2005). Moreover, Nussbaum emphasises the ethical dimensions and aims of education: to support the flourishing of individuals as well as their communities, rather than societal productivity alone (Cockerill, 2014).

Tyson's (2017) conceptions of *vocational Bildung* and *phronesis* offer a framework for examining the VET and VTE teachers vocational knowing through personal development, judgement, and experience. *Bildung* is thus connected to the formation of individual autonomy and development of moral responsibility and agency through education. This is a deeply personal endeavour, tied to personal narratives and biographies. Klafki (2000), in turn, emphasises that *Bildung* is something afforded to the individual rather than

imposed. This notion of *Bildung* thus aligns with Nussbaum's notion of capability, though it remains intricately linked to individual agency and personal history, understood not as a property or trait of the individual, but as something enabled or constrained by the social (and material) context.

In addition, we consider vocational knowing from an ethico-philosophical perspective, drawing on Aspelin's (2021) notion of *teaching as a way of bonding*. Like the capabilities approach, a relational perspective on teaching emphasises personal and interpersonal relationships, rather than certain activities or goals to be reached. Aspelin refers to Buber's (1994) concept of the interhuman dimension, where the teacher and student engage in an *I-Thou* relationship. The pedagogical relationship is formed when teacher and student recognise one another as *the Other*, acknowledging their inherent differences. Thus, teaching occurs in the in-between rather than within or outside the individuals themselves. While social bonding happens in all teaching, through communication and interaction, relational bonding can be understood as a situated process that occurs only when teacher and student directly engage with one another, presupposing that the teacher perceives the student as a 'whole person'. As such, teaching becomes a matter of communion, of 'meeting together' rather than merely the transmission of knowledge or the facilitation of individual freedom.

Method

The article is based on interviews with VTE teachers (N=10) and VET teachers (N=6), and is part of a broader study which can be seen as a form of self-study, a method developed as a mode of Participatory Action Research (PAR) (cf. Loughran, 1998).

Participants and setting

At the outset of the study, the participating VTE teachers were all employed at the same university faculty. Regular meetings were held where the teachers met to discuss and develop the VTE programme and address research and policy within the VET-field. The idea for the project was formulated in this context. All members of the teaching team were invited to participate, both as informants and researchers. One chose to opt out, while two opted to participate only as informants. Nine of the VTE informants had experience as teachers in upper secondary school, with several having taught general subjects within VET programmes, while two were qualified in vocational subjects. They had also held various other positions, such as principal and special needs coordinator. Four of the participants held a PhD degree.

VET teachers were invited to participate based on the criteria that they were active teachers and had maintained contact with the university as supervisors of new VTE students or had joined an alumni-network. Engaging alumni from the local VTE programme was found relevant as one of the purposes of the project was to investigate and develop the programme and our own teaching practices. Invitations with information about the project, including ethics, were sent by email. Six VET teachers accepted the invitation: two working in adult education programmes (Child Care Assistant and Health Care Assistant) and four in upper secondary school programmes (Building and Construction, Hotel and Tourism, Restaurant Management and Food, and Natural Resource Use). Their work experience as qualified VET teachers ranged from 2 and 11 years.

Data production

The research team collaboratively planned the work, defined the research tasks, divided assignments, and met regularly to discuss progress. The interview guides were organised in major themes to enable semi-structured interviews. The VET teachers were then interviewed by different members of the research team. Three members of the team conducted interviews with the other VTE teachers, as well as with each other. All interviews were conducted in Swedish. Due to the Covid-19 pandemic, all interviews were carried out online. The interviews lasted for 60–80 minutes and were transcribed verbatim.

Data analysis

The analysis was conducted in several stages: (1) interviewers read through transcripts of the interviews they had conducted, highlighted segments that they found expressive of different perspectives and notions related to the research questions, and made brief summaries, (2) the summaries and notes were then presented and discussed during team meetings, (3) a matrix was constructed to enable analysis of patterns across the interviews, (4) the team searched for and shared relevant research literature and concepts of relevance for the project's aims and emerging themes. This provided a critical lens for our interpretations and enabled us to position the study within the broader research field, and (5) themes were thus constructed and refined in an iterative process. Quotes illustrative of the themes were chosen, and translated to English.

We gather this abductive approach as a form of thematic analysis (TA) (Braun & Clarke, 2006, 2021). Certain key concepts, such as Community of Practice (CoP) (Lave & Wenger, 1991) and phronesis (Aristotle, 1970) were adopted early in the process, due to their clear alignment with our research questions. These concepts served as analytical lenses to 'think with' from the outset. Other concepts, for example vocational Bildung (Tyson, 2017) and teaching as a way of bonding

(Aspelin, 2021), were adopted later in the process, in response to initial inductive analyses.

Ethics

The study has been conducted in accordance with the ethical guidelines issued by the Swedish Research Council (2017) including GDPR (General Data Protection Regulation). The participants were informed that the data would be treated confidentially, and that personal names and school identities would be pseudonymised in all research material and publications, which has been done. As the study does not include sensitive personal data or otherwise fall under the Ethical Review of Research Regarding Humans Act (SFS 2003:460), it has not undergone a formal ethical vetting.

The main ethical considerations concern the fact that the study is a form of self-study (cf. Loughran, 1998). These considerations include: (1) the dual role of the VTE teachers as both interviewers and participants, (2) their involvement in analysing the data, and (3) the participation of VET teachers who were former students of some of the VTE teachers. Potential risks arising from this include the possibility that invited VET and VTE teachers might have felt obliged to participate, the risk of participants' identities being disclosed through backtracking, and that the interviews as well as the analyses may be more consensual and less critical, as a social desirability effect could be expected. On part of the VTE teachers, these risks were balanced to some degree by: 1) the fact that the aims as well as the methodological approach were developed collaboratively within the VTE team, emphasising that participation was voluntary, 2) the collaborative nature of both data production and analysis which allowed multiple interpretations to be voiced and critically appraised from different perspectives, and 3) the fact that the participating VET teachers were former VTE students could also be seen as an advantage: relating to the same VTE context from a student perspective and with some distance to it, while at the same time to their current teaching experience, provided for rich, reciprocal interviews and was an analytical asset.

Findings: Notions and makings of the good VET/VTE teacher

Our analysis regarding how VET and VTE teachers conceptualised vocational teaching skills and capabilities, and what they considered important for developing these, resulted in the identification of five themes: 1) *didactic rote metaphors*, 2) *responsibility for the Third*, 3) *gap bridging*, 4) *knowing and becoming through relationships and communities*, and 5) *understanding policy*.

Didactic rote metaphors

When the teachers conceptualised vocational knowing, phronetic knowledge was foregrounded. However, they did not dismiss the value of procedural knowledge, rules, and facts, that is, *techne* and *episteme*. Instead, the VET and VTE teachers talked of how these forms of knowledge can be addressed in various ways: as a necessary foundation, once in place possible to build from, by 'adding' more complex forms of knowledge, or as integrated with exploration of various alternatives and discussions surrounding *how* and *why* something is done. Borrowing from the teachers own expressions, we call these didactic metaphors 'building from the ground' and 'setting off an avalanche'.

Building from the ground

Some of the VET teachers described that procedural knowledge must 'come first' and requires that the students practice until they have learned certain procedures, facts, and rules. This was typically talked of in terms of the teacher demonstrating and the student mimicking and practicing, as in the example below from a learning situation in the Natural Resource Use programme. When the students are considered ready, the pieces can be holistically forged together and reflected upon:

When they know it you can start adding, perhaps only to do bandaging, which is a task when handling horses. They practice that for a while, so they know how to and then you move on to the next segment [...] you build the foundation first, you build slowly. (VET1, Natural Resource Use programme)

While the VET teachers who expressed this view recognised complexities and ambiguities, they also conveyed an implicit notion that there is a certain template to learn in order to understand and handle complexities, as voiced by one VET teacher:

We cannot force anyone to become good at providing a service or being socially skilled. That does not mean that we don't give them the chance to practice that [...]. It is something they practice from year 1 and forward: 'you cannot put everyone in the same box, you must adapt to different people'. We practice it a lot. Different types of personalities, you know colours, all of that. (VET4, Hotel and Tourism programme)

VTE teachers voicing the 'building from the ground' perspective, acknowledged the importance of a step-by-step approach. Hence, a skilled VET teacher makes sure that students can comprehend certain facts or perform specific tasks before moving on to the next level, with a higher degree of complexity:

Work in very clear steps, for example: you start here, you lay the foundation and then you move on, letting the students choose between different tasks. It becomes a natural thing in the classroom, that we are in different stages of learning. (VTE3)

Setting off an avalanche

Other teachers described the cultivation of phronetic knowledge as something that needs to be integrated with *techne* and *episteme* from the start. As an example, a Building and Construction teacher explained that students need to develop the ability to 'see' or apprehend the finished product at the outset of a task, drawing on the condition that if a product is to pass as finished it needs to undergo strict regulations according to occupational quality standards. However, while acquiring and practicing specific procedures and techniques is a necessary part of learning the vocation, merely 'trading them down' is not enough, as work-methods vary across work sites and over time and are influenced by socio-material conditions. According to this teacher, the capacity to envision a final construction develops gradually and requires that students are given plenty of opportunities to experiment. Recognising that previous schooling had made many students apprehensive, the teacher encouraged them to attempt and possibly to fail as a necessary part of their vocational learning:

That's why I say to my students, you need not copy me at 100 percent because it's possible to develop your way to achieve a result [...] You can do as you wish, you are free just to try [...] You can bricklay the stone like this or that, it doesn't really matter because in school you can make mistakes or fail. But they just panicked [...] They are used to the teachers telling them what to do. (VET6, Building and Construction programme)

The ambition to move away from the 'copying' aspect of learning was emphasised by several of the VET teachers. It involves using one's own vocational knowledge from the previous vocation and acknowledge that a 'right' answer might not exist. For example, a teacher in the Child Care Assistant programme, discussed this as the ability to make decisions based on interpretations of various situations, as well as children's signals:

You can never say: 'if two children argue over Lego, you go in and do this or that, this is the right way.' There are no rights, or wrongs and this is something that our students are looking for in the beginning of their education: 'tell me what to do.' Then it's about throwing the ball back, we can give them five different ways to solve it, but how, it depends on the situation. So, they need to be able to read children and children's signals and young people's signals [...] To make these quick decisions then and there. (VET5, Child Care Assistant programme)

In the quotes above, the teachers talk of how they encourage their students to adopt a position of 'uncertainty'. This was gathered as especially important when faced with situations that are complex or difficult to interpret. Hence, the teachers encouraged the VET students to accept uncertainty in order to 'act anyway', thus developing personal responsibility (cf. Silfverberg, 2005).

VTE teachers sharing the same view on vocational learning, talked of how facilitating VTE students' development of professional judgment, including the ability to read situations and handle uncertainty, requires prompting them to

make deep vocational insights. Consequently, VTE teachers need to recognise and utilise critical stages in the VTE students' development in order to set learning processes in motion. Or, as eloquently expressed by this VTE teacher:

[...] it's about finding that stone, the one that sets off the whole avalanche. I'm going mountain hiking soon, so I got that in mind. Sometimes you see a slope with big and smaller rocks, and you think, if you take that specific one out, it will all be set in motion, and then afterwards, the whole valley will look completely different. That's how I see a vocational teacher – they know which bit to remove or move for everything else to change. (VTE1)

Responsibility for the Third

The relational and ethical aspect of vocational knowing was figured as central throughout the interviews. The VET teachers continuously underlined the importance of their students' concern for the ones they will eventually serve, for example, patients, children or customers. Turning the VET students' attention to the well-being and perspective of the Other was a central theme in the VET teachers' descriptions of their pedagogical work. Hence, the responsibility that the VET teachers felt for their students' vocational becoming clearly included a commitment to guarding the well-being of a third party, as expressed by a teacher in adult education, training Health Care Assistants:

I might ruin an otherwise nice encounter by putting on gloves when I pat you on the cheek. That is not necessary, and it is only we, who are experienced in the profession, who can help the new ones to understand why. It is not ok to be sick and have a glove in your face [...] It doesn't matter how much you know [...] if you don't understand that. (VET2, Health Care Assistant programme)

The ability to critically reflect upon one's actions, evaluate possible consequences and show interpersonal concern is conceptualised by Nussbaum (2002) as 'central human functional capabilities.' Such capabilities are, in Nussbaum's view, crucial to support individual growth and the creation of a 'good life' as well as a pluralistic and equal society. Hence, it is about 'being able to live with and toward others, to recognise and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another and to have compassion for that situation' (Nussbaum, 2002, p. 40). Moreover, the capacity to relate to the Other, in a deep sense, and to act for their best, require that procedural and theoretical forms of knowledge are engaged through a genuine and deeply felt concern. A teacher in the Child Care Assistant programme and her colleague have developed a strategy for evoking this kind of learning through emotional affect:

My motto is: if you can reach the heart, the mind will open. I go for the heart. And then I can come in with the theoretical, the science, the research. You will go along for the ride if I have managed to reach the heart first. If I can achieve: 'how does it feel being yelled at? What do children that are being yelled at say?' If I can have that feeling first. (VET5, Child Care Assistant programme)

Just as the VET teachers considered the wellbeing of the ones that their students would serve in the future, so did the VTE teachers. For students in VTE, they thus emphasised the importance of cultivating trusting relationships with their future VET students, coupled with high expectations and support for learning:

Of course, it's important for a [VET] student to feel liked and recognised. But that's not the only thing, it's also the feeling that here, I will be able to move on. I can get grades together with this teacher, I can learn what I need to learn. (VTE4)

This is in line with Nussbaum (2001) who identifies critical reflection on planning one's own life as a central human capability.

Gap bridging

VET teachers emphasised the importance of having strategies to bridge the gap between the school and the workplace. They noted that becoming a teacher involves taking on a new role and professional identity, but one that still contains the old:

I think it is very important to show that I still have a foot in the business [...]. I need to be able to both let go of my professional role and actually become a teacher but at the same time hold on to it. Otherwise, you will miss out on so much of what is going on in the business. I work a little bit at my previous job, at a hotel [...]. I think that the students feel that they get a lot of benefit from that, that they get the right education and knowledge from me, that I'm still in the game. (VET4, Hotel and Tourism programme)

Bridging the gap between the two CoPs was however not without challenges. Joining the two is described by the VET teachers as a balancing act and can be conceptualised as boundary crossing. As an example, the VET teachers felt responsible for mediating the 'school-discourse' at the workplace, through making sense of the syllabus and 'translating' grading criteria, thus performing the role as teacher. Conversely, in the school context, they took it on themselves to represent the conditions of work life. Through sharing stories and experiences about certain actions, situations, and dilemmas from the position of a central member of the vocational CoP, the teachers help students to identify, compare and reflect on core practices and knowledge (cf. Akkerman & Bakker, 2011).

Gap bridging further includes exceeding the boundaries of courses, making space for reflection and discussions on topics of concern for students' vocational becoming; to address problems and dilemmas as they surface, independent of learning targets in various courses. According to Akkerman and Bakker (2011), this kind of boundary crossing serves to create space for change and transformation. One such example given was weekly morning meetings where students were invited to share stories of vocational learning and reflections, and to discuss them in class. Another example was given by a teacher in the Child Care Assistant programme (VET5) who had developed a digital journal together

with a colleague, serving as 'a window to work-place based learning'. In it, students documented and reflected on observations from WBL from different perspectives and were encouraged to share dilemmas or challenges that they faced. This served as a safe space for students to discuss important vocational matters with their teachers.

The VET teachers also addressed gap bridging as pivotal in VTE. Their own work and experiences of teaching during practicum were often referenced and used in discussions and assignments. Sharing experiences and stories, and mirroring their vocational knowing and becoming towards each other and the VTE teachers, was brought forward as formative and meaningful.

VTE teachers too emphasised the importance of using VTE students' experiences of learning situations that they themselves had arranged with their students during practicum. Stories of vocational didactics were often shared in VTE courses and much appreciated by VTE teachers as they provided concrete material and a sense of presence and authenticity to discussions of vocational knowing and how it can be cultivated. This allowed for students to make personal sense of vocational experiences and dilemmas, in contrast to learning directed by pre-defined targets, and enabled them with the help of their teachers to engage in a continuous process of vocational becoming, during the course of the programme. These examples can be understood through the concept of vocational Bildung, where phronesis is afforded through personal experience, development and judgement (cf. Tyson, 2017).

Knowing and becoming through relationships and communities

Both VET and VTE teachers emphasised that their vocational knowing and becoming had developed through various communities and relationships. The VET teachers referenced their own upper secondary education, former work experience, family members, and VTE as significant for developing both knowledge and a sense of legitimacy. One VET teacher spoke of how VTE had strengthened both personal growth and academic confidence: 'I had somewhat low self-esteem when I entered university: how is this going to play out? They [the VTE teachers] taught me how to grow as a human being, they saw me as an individual: "'you know something'" (VET6, Building and Construction programme). Colleagues and mentors at the schools and fellow VTE students were also ascribed a significant part in VET teachers' vocational becoming.

Moreover, the teachers described how they, when they first started teaching, were pre-occupied with doing things 'right', focusing on practical situations and transforming the students into 'professionals': 'I was used to having staff that was paid [...] but they [the students] are here to learn [...] that difference is very clear to me now' (VET4 Hotel and Tourism programme). The teachers also voiced

how, with time, their focus had changed and was directed towards relational aspects of their students' learning:

Better human beings. That is my biggest task. Clearly, I educate them to be bricklayers, tilers, yes. But, the compensatory mission, that is my philosophy, and I vouch for that. When they leave me after three years, they should be better as humans and hopefully, they should also be a little bit better at laying bricks and tiles. (VET6, Building and Construction programme)

Indeed, forming relationships with students appeared as central for the VET teachers' 'teacher becoming'. In their stories of their own VET teacher becoming, many foregrounded meeting diversity among their students as particularly formative. As an example, a teacher in adult education, training health care assistants said: 'Certain students, their individual situations, and their striving to learn, many times helps me to figure out better solutions. Many of them affect me [...] they see solutions that I don't' (VET5). Thus, the teachers' view of vocational knowing and becoming can be understood through the aspect of relational bonding in education, where the creation of relationships is put in the forefront (Aspelin, 2021).

The VTE teachers too referenced various professional communities as contributing to their teacherhood. For example, teaching in vocational or general subjects, working as school leaders, special needs educators or researchers obviously impacted their becoming as VTE teachers. The belonging to various educational CoPs provided to their sense of being legitimate VTE teachers. However, the VTE teachers equally emphasised, both as a problem and an affordance, their *un-belonging* to the CoPs of the vocational occupations of their students:

I realised that I can be a coach. I can be a catalyst. I'm not going to make them do anything. Instead, I'm going to make them think. I can show them where the water is, but I can't make them drink. So yes, I have found a niche that makes it possible for me to be a legitimate teacher trainer. (VTE1)

The VTE CoP thus encompasses vocational knowing from various professional CoPs, which is a precondition to accommodate the VET students' needs and to address the complexity of the VET teacher role. The legitimacy of VTE, therefore, does not rest solely on the ability to mediate didactic expertise related to specific vocational occupations or fields. Instead, it lies in integrating different kinds of expertise, both educational and vocational. This involves recognising the expertise of both colleagues and students in VTE, and allowing each other to develop by adopting a position as 'unknowing':

VTE teachers have different competences, but we complement each other, all parts are needed, and everyone does not need to know everything. The same goes for teachers in upper secondary school: to harbour each other's competences. (VTE7)

This recognition also makes for a more equal relationship, where VTE teachers often take on the role of learners in relation to their own students:

I think it's very fun to work in VET teacher training, because I learn things all the time. Every lesson or every time I meet the students, I feel that I learn something. I realise that there are so many different fields and domains, with their specific conditions, and so much knowledge that I don't have [...]. What has shaped me is [...] meeting the students, and colleagues. Going into it with a sense of: 'I know certain things; I bring this into it. But you have a lot of knowledge that I don't'. It becomes a pretty equal relationship in that way. (VTE5)

This is exactly what Aspelin (2021) refers to as relational bonding in education: an ethical process where interpersonal relationships are seen as a prerequisite for learning. By adhering to the Other as someone inherently different, learning becomes reciprocal and teaching a question of 'meeting together' rather than a transference of knowledge (cf. Buber, 1994; Nussbaum, 2001).

Understanding policy

Even if vocational knowing was seen as cultivated through collaboration and dialogue within VTE and together with more experienced colleagues, an emphasis was also put on the ability to make correct assessments and plan teaching in accordance with the syllabus, that is, to understand and mediate policy:

We had this, with the policy documents, how the school system works. Because you don't know that from before, not even when you went to school yourself. [...] When we did these, alignment assignments, it made you think: what is this? Rather than, I can make something fun out of this. It must generate something. They are supposed to reach a degree. What should they know in order to do that? What's the goal of their education? Where do we put the emphasis? If you don't know that, it's hard to provide a good education for the student. (VET1, Natural Resource Use programme)

Assessment and alignment planning of lessons were frequently mentioned by the VET teachers as valuable contributions from VTE to their development of professional knowledge. However, for some of the VET teachers, this knowledge only became fully comprehensible after they had been teaching for a while and had interacted with new VTE students:

It isn't until now that everything falls into place, when you realise that these various concepts that I'm battling with, they come from VTE: it's the literature we read, the assignments we did. I can connect the parts now [...] I have a colleague who does her second year in VTE, and I get some repetition there. (VET4, Hotel and Tourism programme)

The VET teachers talked about learning matrixes, clear planning, and formative assessment as means to make sure that students acquire the abilities needed and stated within the curriculum.

The VTE teachers, on the other hand, took a more critical stance and challenged what they saw as simplified notions of learning and teaching that undergird the prevailing policies, which they thought reinforce a theory-practice dichotomy. Rather than pointing towards knowledge requirements and what 'has to be' taught, they called for VET teachers to ask themselves why and how a certain content should be selected and taught, as expressed in the quote below:

I would wish that vocational teachers planned more, deconstructed the content, downplayed the syllabus, this ready-made... More of analysis à la Klafki: 'What does this content have to offer today, tomorrow?' Substance is about communal meaning-making together with the students, but you need to think a bit in advance. So, you don't just stand there and say: 'The purpose of today's lesson is x because the syllabus says so. We will talk about water samples because it's in the learning targets'. That's killing, devastating! (VTE8)

We associate this view with the ideas of vocational Bildung, which emphasise the VET teacher's affordance of individual autonomy and agency based on experience (cf. Tyson, 2017). It further aligns with Nussbaum's capabilities approach, which underlines that education should not focus solely on societal efficiency but rather be directed towards the common good and fulfillment of both communities and individuals (cf. Cockerill, 2014).

Discussion and conclusion

So, what are the most important 'take home-messages' of this study when it comes to developing the VTE programme? More specifically, how can the results from this study contribute to realising VET and VTE with ambitions beyond demands on employability and reproduction of the workforce, that is, vocational education that supports critical thinking, reflexivity and the positive growth of individuals and communities? This question will be the focus of the discussion – but first a summary of our main conclusions. These regard how VET and VTE teachers conceptualise vocational teaching skills and capabilities and what they consider important in developing these.

Didactic rote metaphors: Building from the ground or setting of an avalanche

VET and VTE teachers alike emphasised vocational phronesis as the primary goal of vocational education. We use this concept to refer to professional and ethical judgment, an ability to 'read' a situation and make decisions even when what is right and wrong are not given beforehand (cf. Silfverberg, 2005). Vocational learning was in turn conceptualised as either a matter of 'building from the ground', gradually proceeding from simple facts and procedures towards increased complexity, or as a transformative process, captured in the metaphor 'setting off an avalanche', where teaching becomes a matter of setting things in

motion to expand students' capabilities. Hence, phronetic knowledge was seen as something that either needed to be preceded by *techne* and *episteme* or as integrated with it from the very beginning.

Responsibility for the Third

The VET teachers recognised their duty to support students to act wisely, guided utterly by a deeply felt responsibility for the good of the Other (cf. Nussbaum, 2001). Moreover, the VET teachers emphasised care and responsibility that extended to the future beneficiaries of their students' vocational roles, whom we refer to as the *Third* – the patients, clients, or others whom their students will eventually serve. In this, drawing on multiple ways of apprehending and relating, including bodily and affective dimensions, were seen as pivotal. One example of this is the VET teacher who was drawing students' attention to the feeling when being yelled at and voiced the motto 'if you can reach the heart, the mind will open. I go for the heart. And then I can come in with the theoretical, the science, the research.' This sense of responsibility for the Third was mirrored among VTE teachers, who viewed their work as contributing to the improvement of VET through the development of ethically grounded vocational educators.

Gap-bridging

Similar to Fejes and Köpsén (2012) and Nylund and Gudmundson (2017) the VET teachers in our study described balancing their identities as both vocational experts and educators. They also stressed the importance of remaining active members of their original vocational CoP to legitimise their role as educators, whilst simultaneously integrating into the school's CoP. The VET teachers also, and in line with Kilbrink et al. (2023), continuously used their own experiences from practice to transform and translate the syllabi by sharing stories and situations for the students to reflect upon. Hence, multiple CoPs became connected, creating space for learning through boundary crossing (cf. Akkerman & Bakker, 2011). In parallel, and similar to the findings of Duch et al. (2018), the VTE teachers sourced legitimacy and tools from their various CoPs, including VET, special needs education, adult education, and the academia as means for affording their own vocational becoming, sharing experiences from, for example, adult education or research.

Knowing and becoming through relationships and communities

In line with Antera (2022), Asghari (2014), and Gidlund (2020), we found that VET teachers emphasised the responsibility that they felt not only for their students' vocational becoming, but also for their well-being and future. Indeed, meeting the student as a 'whole person' (Aspelin, 2021) turned out as a strong driver for VET teachers. Interpersonal and relational aspects were highlighted

also by the VTE teachers, often in connection with the notion that they themselves could not offer direct insights into the specific practices of different vocations, as they were not embedded in those CoPs. Instead, they relied on the VTE students, who brought with them a wealth of knowledge from their respective vocational CoP. This reliance on students, created a space for mutual exploration and co-construction of vocational knowledge, where the diversity encompassed in the VTE student group together with the VTE teacher's position as 'un-knowing' were leveraged as pedagogical tools for epistemological and pedagogical exploration and conceptualisations.

Understanding policy

Finally, we found that the institutional context of VTE entails a tension between adhering to educational policies and fostering a critical, dynamic approach to teaching. The VET teachers foregrounded knowledge about institutional frameworks, such as grading systems and curriculum alignment, as significant contributions of VTE to their professional capacity, and as essential tools for supporting their students' learning. VTE teachers on the other hand expressed a more critical stance, noting the heavy focus on policy in teacher education as reflective of an instrumental and reductionist model of education.

Hence, our findings show that VET and VTE teachers' vocational phronesis is a complex matter, embedded in a multiplicity of CoPs. Moreover, since VET and VTE are part of the national education system, they are framed by, for example, curriculum and grading systems, which govern what should be learned and assessed. Further, as a university programme that includes practicum, this institutional framing has qualities that are pivotal for vocational phronesis, such as critical thinking, other features are potentially challenging: the separation of theory and practice in different courses, the emphasis on academic skills and written individual exams (cf. All et al., 2018) related to predefined course targets and the limited space and time for students to engage in common discourse with each other and teachers.

Our findings, along with previous research (cf. Alvunger & Grahn Johansson, 2018; Berglund et al., 2020; Duch et al., 2018), show that VTE teachers struggle to overcome these constraints, and we argue that they can inspire changes that favour the affordance of vocational phronesis in VTE more systematically – both within existing institutional frames and through means of critically analysing these frames. This includes allowing VTE teachers to focus on VTE students' becoming as teachers, through supporting their individual journeys of vocational Bildung (cf. Tyson, 2017). That is, not reducing the complexity of vocational phronesis in order to make it easy to teach and assess in regard to predefined course targets – but recognising it and engaging with it together. This requires that students are afforded the opportunity to form trusting and reciprocal

relationships with both peers and teachers over time – communities where they can engage as ‘whole persons’ and be supported to voice and analyse dilemmas and concerns, as well as explore epistemological, didactic, relational, and political aspects of vocational learning and becoming. In this, different backgrounds, experiences, and perspectives among both students and teachers should be drawn upon as pedagogical resources. We need to create space to share stories of vocational situations and ‘becomings’, recognising that everyone brings unique perspectives and experiences. We further need to draw on a wide range of methods for developing, demonstrating, and putting vocational knowing in play, in such ways that mirror the complexity of vocational phronesis, including bodily and affective dimensions.

We argue that the future of vocational teacher education lies in embracing the complexities of vocational phronesis. This involves fostering environments where uncertainty is seen as a space for growth, relational bonds are nurtured, and policy frameworks are critically engaged with rather than rigidly followed. VET and VTE teachers who embody vocational phronesis can act as gate-openers, guiding students into CoPs where they can find belonging and purpose. Such an approach is essential for supporting students from diverse and often marginalised backgrounds, offering them the tools to develop both professional and personal agency and belonging. By focusing on vocational phronesis as a compass for educational practice, we can contribute to a more just and inclusive vocational education landscape that values social responsibility, critical inquiry, and the shared mission of fostering the good of the *Other*. In conclusion, we must consider how VTE in a more systematic way can support an education that is genuinely transformative and inclusive, and challenge structures that lead to inequity.

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A community's practice: A case study of professional development among vocational and arts teachers

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Abstract

Since considerable resources are invested in the professional development of teachers, there is an urgent need to investigate various models. In Sweden, schools often use thoroughly structured continuing professional development packages for teachers – with pre-set goals, methods, and questions to discuss. The aim of the present study is to gain knowledge about how professional development is constituted in a specific teacher community, within the context of teaching and assessing practical knowing. A group of arts and vocational teachers at a Swedish upper secondary school voluntarily engaged in a year-long developmental Teacher Community (TC), in which explorative talk about teaching is central. Podcasts created in teams of two after peer observations and group meetings are analysed at multiple levels to identify what they talk about and how. Based on the analyses of the explorative discussions, we used the theory of Communities of Practice to understand specific features of the practice of the teachers' professional development. The main result is that, while the teachers are building a strong common platform for professional development through their TC, the learning processes are solitary journeys and their individual professional responsibility. One of the characteristics of the interaction within the TC is the absence of critical approaches to peers, which is often prompted as a prerequisite by previous research. Instead, with esteem as characteristic for the explorative discussions, the TC demonstrates complex reasoning on professional identity and an eagerness to learn more from others about teaching practical knowing. Finally, we suggest alternatives to overly structured CPD packages with pre-set goals and methods.

Keywords: teacher community (TC), continuing professional development (CPD), vocational teachers, arts teachers, practical knowing, development, community of practice



Introduction

Since considerable resources are invested in the professional development of teachers – often with the framing of structured, uniform packages with pre-set goals, methods, and questions to discuss (cf. Cochran-Smith & Lytle, 1999; Desimone, 2009; Kennedy, 2005; OECD, 2019; Skolverket, 2024) – there is an urgent need to investigate various models. In Sweden, schools often use thoroughly structured continuing professional development (CPD) packages for teachers which have been provided by Skolverket (National Agency for Education) or by companies offering professional development courses. In this article, we investigate a case of a locally organised professional learning community which did not use a pre-designed CPD package. We strive to gain knowledge about how professional development is constituted in a type of teacher community (TC) well aligned with the form Vangrieken et al. (2017, p. 52) describe as ‘using the teachers’ practical experience as the main resource, [which is] of significant importance for the success of a TC as it provides a focus on the participants’ needs.’

We address what a group of teachers make a focal point in terms of teaching and assessing practical knowing in explorative talk. Here, *practical knowing* is a concept that refers to subject-specific capabilities within the vocational and aesthetic subject domains (more than knowledge in terms of specific subject matter), in a similar vein to Carlgren et al.’s (2015) definition of practical knowing. We analysed the teachers’ verbal interaction to identify *what* they talk about and *how* they position themselves in relation to topics and to each other. Taking the analysis one step further, we relate the results to the theoretical framework of Communities of Practice, CoP (Lave & Wenger, 1991; Wenger et al., 2002), to draw a conclusion about the specific features of the practice of the community’s professional development.

The year-long TC under study was initiated by the current school’s leadership in response to vocational teachers expressing dissatisfaction with a shift towards predominantly assessing practical knowing in written tests at the expense of assessing domain-specific physical action. The current teachers enrolled in the TC voluntarily based on their interest in assessment and grading of practical knowing. The TC consisted of four vocational teachers, representing different programmes, and three teachers from the Arts programme. One of the authors, who is employed at the school and affiliated with a regional university, was asked to moderate the TC.

It is important for the understanding of this study that the TC would have progressed without the research. The idea of linking practice-based research to the ongoing TC grew during the initial meetings, during which research literature on practical knowing and assessment was discussed. The other author (also affiliated with the regional university) was invited to participate. The idea

was to pave the way for a study that included both an insider and an outsider perspective on the ongoing process. The research project initially addressed what aspects of practical knowing the teachers highlight in professional development of their own assessment practice. In the TC meetings, the researchers kept a low profile when guidelines were outlined regarding what the teachers would discuss. We facilitated activities rather than directing them, which involved measures such as allocating turns, affirming, managing practical matters, and asking for explanations and examples. It can be assumed that the researchers' low profile contributed to creating an open climate in the TC that enabled teachers to highlight what was central to their own practice (see *Method discussion*).

The research context

The TC met 14 times over two semesters. The first semester included literature studies and explorative talks focusing on possibilities for unveiling aspects of subject-specific practical knowing. At stake were attempts to articulate professional viewing (Goodwin, 2018) of pupils' domain-specific physical action, such as holding the fillet knife at a specific angle to the backbone of a fish. The correct angle is audible in terms of a proper 'filleting sound'. During the second semester, we (the researchers) initiated cross-programme peer observations. For instance, an arts teacher observed a vocational teacher and vice versa. Each of the observation pairs produced a podcast in which they discussed what caught their attention in the observations. The guidelines were: 'you can freely choose what you consider most relevant to talk about for 20 minutes, aligning with the concerns of our TC'. Everyone then listened to all the podcasts and reflected on them collaboratively in two meetings. Finally, the teachers planned a smaller or larger intervention in their own practice linked to their TC experiences so far. The interventions were reported and reflected on collectively in the last two sessions.

At an early stage of our analytical undertakings, it was obvious to us that the TC's focus had widened, from assessment and grading to relational issues in class, pupils' motivation, domain-specific language, plans for future collaborative projects, and – strikingly often – esteem for each other's attitudes towards pupils and didactical choices which was linked to ideas for one own's future teaching.

The widening of interests in the TC align with a bottom-up type of professional learning community (Skolverket, 2024), where the teachers 'provide much of the learning content on their own' (Vangrieken et al., 2017, p. 48). The investigated TC can also be understood in terms of Cochran-Smith and Lytle's (1999) form of teacher learning, which assumes that teachers are experts in their own contexts and can learn from their own actions and reflections.

We became interested in the characteristics of a professional learning community centred around the experiences and practical needs of the teachers, *instead of* being based on pre-designed professional development models. We discerned a research problem with the vantage point of the current teachers sharing a generic didactical understanding within practical knowing, while at the same time not sharing a common ground regarding domain specifics. Given the teachers' common background of experiencing the master's view on the novice's acquiring of practical knowing, we wanted to gain insight into *what* they put forward as essential in their own professional identity and development within the context of teaching and assessing practical knowing, and *how* they do that. Such questions attune to Sülau (2019), who states (with the support of others, e.g., Darling-Hammond & Richardson, 2009; Little, 2002; Meirink et al., 2007)¹ that more research is needed on *how* teachers' development is supported by teachers' professional communities, not just *what* they learn. Sülau argues that research with micro-analytical perspectives, such as ours, can contribute to insights needed in those questions.

Aim and research questions

The aim of the present study is to gain knowledge about how professional development is constituted in a specific teacher community, within the context of teaching and assessing practical knowing. This aim is pursued by asking the following research questions:

1. What topics do the teachers highlight?
2. How do the teachers position themselves in relation to the highlighted topics and to the other members of the teacher community?
3. What insights about the teachers' professional learning emerge when the teacher community is regarded as a community of practice?

Previous research

Teacher communities

Learning environments that promote good school development outcomes are described in the international literature as Professional Learning Communities (PLC), Teacher Learning Communities (TLC), Teacher Communities (TC), or other concepts signalling teachers' professional learning and development in groups. We have chosen to use the term TC in this article and have largely used Vangrieken et al.'s (2017) research review and Sülau's (2019) dissertation to create a research context for our own study. Timperley (2019) has also compiled what characterises successful learning communities among teachers. She describes six

key factors, namely a clear goal and common focus on student learning; basic trust between teachers that enables openness, dialogue, and critical examination of each other's practice; intensive interaction between teachers who share, explore, and debate their ideas and practices; leadership and structure; different types of sources of knowledge; and adaptation to the local school's needs coupled with a connection to curriculum and overarching school policy. TCs frequently play a central role in teachers' CPD, making research from this field relevant to our study.

Previous studies on vocational teachers' professional development show, among other things, that the professional development project must take place in a learning and development-oriented culture (Leonardsen, 2021) and that individual driving forces are crucial when vocational teachers assess the value of competence development activities (Andersson et al., 2018). Other studies on teachers' participation in professional development activities present two kinds of motivating factors: intrinsic (personal interest, curiosity, and passion) and extrinsic (acknowledgement from others, accountability, and external rewards) (OECD, 2019). Aamodt et al. (2016) suggest that vocational teachers generally collaborate less with other teachers, despite articulating a greater need for it. They are less satisfied with their professional practice, but have high confidence in their own teaching ability (Aamodt et al., 2016). At the same time Wermke (2013) argues that Swedish teachers, who have a lower degree of professional autonomy than German teachers, are less critical of the sources of knowledge that are used as the basis for CPD. Due to stronger governmental teacher control in Sweden, the teachers do not have to take the same (collective) responsibility. Instead, the exchange between colleagues that focuses on personal experiences becomes at least as constructive for the teachers to take part in. In other words, discussions with colleagues are a way to develop professionally, and vocational teachers generally express a need for this.

The relational interaction in the group of teachers is the most crucial factor predicting whether the participants in a TC change their understanding and practice (Vangrieken et al., 2017). Teachers' willingness to cooperate and conduct activities together, and to let other teachers into their classroom and their thoughts on teaching, is dependent on emotional support provided by the group and on the teachers creating a context in which they can share experiences and thoughts more deeply than just surface level. In Sülau's (2019) study, the teachers learn and develop by sharing experiences from their teaching practice and support each other by asking questions and being supportive in the verbalisation of thoughts and reflections.

There are several potential problems with this kind of cooperation and trust. Vangrieken et al. (2017) highlight a cautionary note regarding the use of peer observation as an evaluative tool for participants' teaching practice, as it might

create tensions in the group and negatively impact the functioning of the group. In Langelotz's (2014) study on group interaction within a CPD project, the teachers admonish each other and position each other as good or bad teachers. Conflicts can arise based on personal dislikes as well as on different individual perceptions of what a skilled teacher does.

At the same time, researchers (Brodie, 2014; Sülau, 2019; Vangrieken et al., 2017) warn that completely conflict-free collaboration does not lead to development. 'Questioning or challenging each other's positions, attitudes or experiences is part of the collegial form that gives teachers the opportunity to develop' (Sülau, 2019, p. 137 [our translation]). In Sülau's (2019) study, the teachers confirmed, encouraged, *and* questioned each other's views. This occurred both in relation to the studied CPD's predetermined topics of conversation and in relation to the other participants. In summary, the delicate interplay between safety and challenge seem to shape a fertile ground for professional growth and transformative learning experiences.

Theoretical perspective: Communities of Practice

The results of the present study are interpreted through the lens of *Communities of Practice, CoP* (Lave & Wenger, 1991). The CoP framework understands learning and development as social and situated, intertwined with the participants' heightened involvement in the practice of a community. A CoP can be defined as 'a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis' (Wenger et al., 2002, p. 4).

The identity of a CoP is constituted by (i) a shared *domain* of interest, in which the members form (ii) a *community* by engaging in joint activities that develop their competence in relation to a specific (iii) *practice*, for example teaching (Wenger, 2011). In the present study, the teachers share domain, community, and practice to a large extent (i.e., work at the same school, teach practical knowing, and meet in the TC). The CoP framework, which is common in the educational field (Vangrieken et al., 2017), was applied here to understand the features of the current community in relation to professional development. To reach such an understanding, we used some central concepts: *mutual engagement*, *joint enterprise*, and *shared repertoire*, suggested by Wenger (1998) to constitute the foundation of an effective CoP.

Mutual engagement refers to processes of learning and development as ongoing and evolving, in which relational links between individuals and subgroups in the community play a crucial role. The individuals share professional experiences, for example from teaching. Mutual engagement involves the mutuality of *social learning*, a concept embracing the course of appropriating knowledge and skills

through engagement in social interaction among the members of the CoP. Participants take on roles as *master and novice*, where the master is positioned as a more experienced member. For example, it can be expected that a teacher who visits a programme they have never visited before (i.e., a *legitimate peripheral participation*, speaking with Lave & Wenger, 1991) will take on the role of a novice, as determined by the newcomer's limited horizon of understanding of what is going on. The standard pattern is that the novice picks up ideas from the master on how to perform in the community. However, development through the activities of the CoP might involve any member, not just novices (Wenger et al., 2002; Wenger, 2011).

Joint enterprise is related to the members' commitment to their professional development process, why negotiation and renegotiation of ideas and performance come to the fore. Thus, collective undertakings shape the CoP. All members are invited to contribute to the building of new knowledge (Wenger, 1998), which makes it relevant to examine social positioning and the construction of professional *identity* in TCs of the sort at hand. According to Wenger (1998), building identity in CoPs implies that a member sees themselves as a specific character linked to the ways the member indulges in the developmental processes of the community.

Shared repertoire refers to the members providing and unpacking domain-specific knowing to the community that can support professional development. For instance, teachers might share teaching ideas and materials and highlight something that was previously not given much attention. In unpacking knowing and developing shared repertoires, *shared meanings* evolve. This concept embraces stages of negotiation about meaning in the community (Wenger, 1998). For example, shared meanings about teaching could emerge from discussions after teachers' observations in each other's classrooms.

Materials and methods

The results of this study are based on multiple analyses of transcripts from the recordings of six hour-long meetings with seven participating teachers and three podcasts in which the teachers reflect on pair-wise peer observations. In this article, the excerpts are translated from Swedish with readability as the main guideline.

Our general research approach is phenomenographic in terms of an interest in how a group of people understands a phenomenon (Marton, 1981). The phenomenon in this case is the TC as a form of teachers' professional development. An assumption in the present study has been that how the teachers interact and what they discern, highlight, and discuss about teaching and assessment of practical knowing reflect their conceptualisation and understanding of the phenomenon.

The analytical steps in the present article move from a fairly descriptive level of what the teachers say and how they position themselves and others in relation to what is said to a more theoretical understanding of the phenomenon by perceiving the TC as a community of practice. In line with our general research approach, we stick to a second order analysis in terms of focusing the participants' views, however without using the traditional phenomenographic tool box.

The first analytical step embraced *what* was talked about in the TC. We used a theoretically informed content analysis (Saldaña, 2021) of the transcripts, which consisted of identifying prevailing topics in the teachers' discussions about teaching by using Dimenäs and Taflin's (2018) *teaching-in-action* model as a framework. The model was originally developed as a guide to discuss the teaching work of student teachers in their workplace-based learning, including the following topics: *Teaching Object, Organisation, Contextualisation, Generalisation, Communication, Challenge, and Assessment*. We conducted the coding in parallel processes with frequent evaluations, and initially used the same data to calibrate the interpretations. We added the topic of *Relationships* to highlight a specific and frequent theme within the topic of communication. The concepts are presented in more detail when operationalised in the results.

The second step of the analyses encompassed a more inductive interpretation (cf. Alvinus, 2023) on how the teachers interacted with the identified topics and with the other participants – however, without any theoretical frame. The analytical questions concerned three themes. They included positioning towards: a) discussed topics, b) being a learning professional, and c) building relations. We used a general content (thematic) analysis of the empirical material, including systematic coding, reflections on the results, refined coding, and examination of relationships between the main clusters (Rapley, 2011), conducted in parallel processes with frequent evaluations of the researchers' interpretations regarding positioning as follows:

- a) **Discussed topics:** How do the teachers position themselves towards the topics identified in step 1? Are there any critical inquiries into their own practice or abilities?
- b) **Being a learning professional:** What do the teachers express as new or as generating new thoughts? If the teachers express meta-reflection of their own learning or a wish to develop their own teaching, how do they do this?
- c) **Building relationships:** Confirmations of the didactical choices of other participating teachers, general confirmations of others or critical inquiry into the practice or ability of others – when, who, what, how? If they express a desire to cooperate with others, how do they do this?

Thus, the second analytical step embraced aspects of *how* the teachers talk.

Finally, by interpreting our material through the CoP lens, we strived in our analyses to gain further insights into how the teachers interactionally construct their community to understand the prevailing learning. This is an important step, from *what* is said and *how*, to what meaning this interaction has for the teachers' professional development.

We have adhered to the ethical principles set forth by the Swedish Research Council (Vetenskapsrådet, 2017) to protect the participants and to ensure high-quality research. For example, informed written consent was obtained when the development project transitioned into the research phase. Furthermore, data is securely stored behind login access, restricted to authorised personnel. Notably, the data does not contain sensitive personal information, and the handling of the data followed the GDPR guidelines.

External anonymity has been maintained by avoiding the identification of individual participants in the results. However, we have chosen to quote their descriptions of their teaching in cases where specific details were relevant for the analysis, even though this could occasionally conflict with the internal anonymity. We are aware that balancing these considerations can be challenging, especially in studies where participants themselves may recall what was said by whom (cf. Vetenskapsrådet, 2017).

Regarding the role of the researchers in the ongoing TC, we refer to *Method discussion* for details.

Results

The results are presented in three sections, corresponding to the three research questions and the three different analyses used. In the excerpts, P indicates podcast, and M indicates meeting (e.g., M1, 10:21, means that the quote starts 10 minutes and 21 seconds from the beginning of the first meeting).

Section 1: Prevailing topics in the teachers' discussions about teaching

Section 1 offers an overview of what content the teachers make central in the TC. The teachers cover a lot of topics. We categorised a total of 129 instances of verbal interaction in line with the eight topics of *Teaching in action*. The diversity of topics is greater in the initial meetings, where they share their free reflections after listening to the podcasts. In the last three meetings, the focus is on the teachers' individual interventions. This decreases the interaction between the teachers as well as the diversity of topics discussed. The topics are presented in order of frequency, where the four first presented topics clearly dominate the discussions.

Communication includes how the teaching object and the learning process are communicated, as well as the role of language. The teachers talk about language as a carrier of culture both in the classroom and within the pupils' future

professional practice. The relationship between language and practical skills is discussed extensively. For example, a need to develop the relationship between speech and physical action surfaces: 'to train to express myself so that I can explain to the pupils better with words and not just hold their hand' (M1, 15:17). Another teacher suggests that, in practical subjects, words can be given meaning through physical action so that pupils experience them sensually as part of the cognitive learning:

It is not that they know all the words [...] but there are certainly a lot of words, and they hide the fact that they do not understand. But the more they work with the things, the more it also clicks in their brains with the words. (M3, 43:28)

Both art teachers and vocational teachers highlight verbal group reflections with the pupils about what kind of problems they have encountered in class and what solutions seem possible. This aspect of communication seems to play an essential role in the classrooms. For example, one teacher positions another teacher as a role model for classroom talk about how the pupils have taken care of 'the time, the product and the planning' (P1, 13:27).

Organisation encompasses how lessons are organised, and what teaching methods are used. Our material shows that it is common to engage in discussions about didactic trade-offs, like whether theory and practice should be separated or not, and about when pupils need detailed step-by-step instructions before a difficult exercise, like 'mixing plaster or glaze, then you can't just wing it' (M1, 50:56).

Two teachers express different needs to create more energy and pace in their teaching. They delve into questions such as structure versus creativity, for example what differs between exercises that require rule following and products that are assessed more based on aesthetics.

The teachers' diverse backgrounds from different domains sometimes call for an explanation of ideas behind their didactical choices. These passages are relatively short, but it sometimes seems difficult to deepen the discussion related to backgrounds. One example is a description of a flavour pairing class, where one of the teachers ends up answering questions from the other teachers on cooking procedures instead of getting to the point of how to teach pupils how to pair food and beverage flavours (M4, 7:00).

A few times, the teachers mention an organisational aspect related to the role of hearing what is going on in studios and shops a bit away from where they are positioned. Being able to hear but not view what is going on, they gain information about how the pupils solve specific tasks. Both drilling and frying are mentioned as examples.

Assessment includes both talk about what is being assessed and how it is done. The teachers elaborate on assessment several times, however not so much from

the perspective of subject-specific grading, rather from a more general perspective of assessing practical knowing, captured by one teacher through: 'Foremost, it feels as if we have more in common than I expected, which does not necessarily mean that I understand the assessment per se, more the way we think around it' (M1, 19:08). Similarities between assessing in different domains is oriented towards the processes of assessing. The teachers also agree that being able to reflect verbally and to use technical language about production processes is necessary to receive a high grade, for example: '[Pupils] might not have the insight into why they act in a specific way, but if there is someone who can explain why they do it like that then they have reached a higher level' (M1, 1:02:33). Several teachers state that assessing pupils' practical knowing on the spot in class is an effortless undertaking, for example: 'I don't need to stand beside someone to see what they do. You can see from several metres away whether it turns out well or not' (P3, 17:04).

Relationships focus on how student-teacher relationships are perceived and discussed. Discussions about classroom relationships primarily focus on building trust and motivation. The observing teachers typically praise a warm classroom atmosphere and informal talk with individual pupils, for example: 'A guy turned up a bit early and you chatted before class. It felt as if you had a good relationship with the pupils' (P1, 01:43). A situation which catches attention in the TC is the possible benefits of approaching pupils in a ruff way with a 'sort of harsh tone' (M1, 25:43), and then changing to a gentler tone. 'The tone is rough but hearty, like saying bullshit or such expressions [... but also] you have a very soft demeanour when you speak with them individually' (P2, 01:43).

Even if esteem of hearty and close classroom relationships is the predominant picture, other stories also emerge, such as displays of uncertainty regarding relationships. In a self-revealing passage, one teacher talks about being perceived as boring 'like boring them stiff if we, well, do the same stuff' (M1, 31:57).

Moving to topics with lower frequency of appearance, we find *Challenge*, which relates to how the pupils are challenged to reach new levels of understanding. We noted dialogues about challenging design of lessons, and how new equipment can challenge what is already known by the pupils. In a tone of esteem, a vocational teacher, after observing an arts teacher's class, reflects as follows: 'I think what you do with your pupils is super awesome. They discover themselves in a very different way than many other pupils do. I think they reach genuine self-understanding' (P2, 10:57).

Teaching object embraces subject-specific content answering the question 'What are the pupils supposed to learn?' In several TC meetings, the teachers engage in unpacking the complexity of practical action in their own domain in order to explain domain-specific content to colleagues that share a profound interest in teaching practical knowing but are newcomers to each other's domains.

Furthermore, the teachers delve into complex reasoning about understandings of specific teaching objects, for instance intertwined aspects of aesthetics and feasibility in the creation of material products, which seems to be relevant in cooking, electrical installation, and producing art.

Contextualisation comprises how the teaching object is framed by references to the surrounding society or the pupils' future profession. We noticed this topic foremost in discussions on links between workplace-based learning and classroom activities.

Generalisation includes how the teaching object is made relevant in other situations than the present one, for example pupils' transfer of subject-specific knowing from one exercise to a new one. One teacher describes a classroom situation 'when we revisit old knowledge or consider what knowledge works anew in a different context or exercise' (M2, 28:53).

Analytically, we conclude that, within the current TC, there is a careful and detailed search for pieces of didactical understanding. The teachers explore each other's methods and weave a rich web of educational matters that stand out as important to them. They achieve a breadth of aspects within the topics above. However, the possibilities seem limited to talk about a few certain aspects within some topics. We relate such limitations to the fact that the teachers represent different domains. We have also shown that, when the teachers elaborate on a great number of other aspects within the topics, they can reach considerable depth, for example the didactical use of the sound of practical skills and the interwoven aspects of word and physical action.

Section 2: Positionings in the TC

The teachers position themselves in relation to the discussed topics, fellow participants, and their roles as learning professionals. The following analysis aims to delineate and emphasise these nuanced positionings.

Positioning towards the discussed topics

All the teachers, at least once, position themselves as experts (secure or self-assertive) in relation to the topics of communication, organisation, and assessment. All but one teacher position themselves as experts in relation to the topics of teaching object or challenge. However, the teachers also position themselves as learners (uncertain or humble), though two teachers never position themselves as learners. The rest of the teachers position themselves as learners at least once – if they previously positioned themselves (or have been positioned by others) as an expert – in relation to the same topic.

The teachers all seem very confident in their knowledge of the teaching object and assessment in their own domain. In relation to the teaching object and to the

culture of the programme they visit, almost all of the teachers position themselves as learners.

Positionings towards the other teachers

The tone of the discussions is often strikingly enthusiastic and appreciative regarding both the TC project and each other's teaching. While peer observations are highly valued, the podcasts also receive favourable reviews (in terms of both creating them and listening to them). Occasionally, some teachers express criticism of the undertaking in the end of the TC project, relating the critique to a stressful workload, especially towards the end of the school year.

All participants express significant benefits from the TC, and four teachers specifically express their desire to continue collaborating with colleagues from the group after the project concludes. These invitations focus on collaboration between arts subjects and vocational subjects, based on common themes in teaching content.

The teachers praise each other's teaching after the peer observations. Most extensively explicit esteem towards other teachers is related to the topics of organisation and relations. Everyone receives praise at least once and esteem is given in all topics discussed.

Direct criticism of one another is rare. However, an indirect comment about pupils not appearing to keep up with the teaching during the peer observation may serve as a form of critique. When the teacher in charge explains the situation, any potential criticism is defused. During the discussions, they seldom contradict each other, but there are instances of challenging someone else's statement. This is done smoothly, where they initially agree and then add a supplementary point (which sometimes involves disagreement).

The teachers do not explicitly ask for their colleagues' comments on their teaching. However, self-reflection and critical inquiry of their own practices occur frequently. Virtually all of them find areas in their own practice that they aim to enhance. The positioning of the teachers can be summarised as professionals in development, yet highly skilled.

Positionings as a learning professional

The teachers describe themselves as reflective practitioners, recognising that their role as teachers necessitates a perpetual engagement with problem-solving and continuous improvement of their teaching.

The peer observation experience initiates several new thoughts. This is deemed valuable by all, regardless of their level of engagement in subsequent discussions. Additionally, there is an overarching meta-level discussion about their individual learning and development as teachers. Many of the teachers describe a perpetual motion – a continuous commitment to learning and

developing, which might require time for digestion: 'Things need to mature within me - afterwards - and it might take some time' (M1, 17:18). The time aspect is also expressed in: 'It's somewhat challenging to articulate the thoughts I currently have. The difficulty lies in expressing what is simmering in my mind ... it's not straightforward' (M2, 31:08). Statements like these, which underscore the non-linear nature of learning and developmental processes, hold relevance, since they indicate that outcomes of development projects continue to emerge even beyond the project's scope.

Beyond these specific instances, the analysis reveals that teachers' motivation to participate in the TC is intrinsically driven by their personal commitment to self-improvement. As one teacher expressed: 'I believe I am here to develop myself, and I feel I have got some new views' (M1, 8:44). In summary, while the TC serves as a collaborative platform, the professional learning and development remains an individual pursuit.

Section 3: The features of the community

With the results in section 1 and 2 as a point of departure, here we illuminate our understanding of the TC related to the theoretical frame: Communities of Practice. Through three themes, we highlight the main features of the current community of practice: i) *learning and development*, ii) *professional identity*, and iii) *relationships*. Within these themes, we try to understand the results as an ongoing construction of a CoP by using the concepts *mutual engagement*, *joint enterprise*, and *shared repertoires* (Wenger, 1998).

Learning and development

Often, and in various ways, the teachers talk about their community as deeply engaged in learning and development, which can be understood as ongoing mutual engagement. As shown, several teachers describe new insights and new ideas for their own teaching gained through the project. However, when asked to link their development to certain occasions or texts in the project, the answers are a bit vague, for example:

For sure, I have used what we talked about. I think we are influenced and things happen without being aware of it when we talk about pedagogy and view other perspectives and suddenly realise, well, shit, that's the way it is in my class too, even if we teach entirely different subjects, so I think that we have appropriated a lot in that way even if it is hard to make that out perhaps. (M3, 32:52)

Identifying the precise origins of our thoughts and articulating the triggers that bring awareness to specific aspects of teaching practice can be an impossible task. However, referencing to each other serves as a touchpoint for ongoing reflection and development, for example when the teachers relate their plans for changing their own teaching to some kind of sociality in the community. Peer observation

and the collective reflections on it are used as the stepping stone for a cycle of classroom exercises based on a list of technical terminology in the observing member's domain. One teacher claims that, through this cycle, the pupils reach 'an entirely different and deeper understanding' and master the current practical knowing better in coming exercises (M3, 39:00).

The members of the community repeatedly talk as if they take on the CoP roles of *novice* and *master*. An evident novice positioning is that all the observing teachers in the peer observations talk as newcomers in an unfamiliar culture. The language, the classroom relationships, and the artefacts are described as new and sometimes hard to understand. A typical example is that: 'when I visited [name], it is my perspective on everything because I don't come from this context, so it is difficult for me to see what [name] discovers among the pupils' (M1, 15:43).

The concept of novice can include a peripheral but legitimate participant's insight about what they can change in their own practice. There are many mentions of shortcomings in one's own teaching compared to what was observed in the organised peer observations, for example: 'It was obvious that I had no structure for my session [... while] you had a very transparent structure' (P2, 13:10). The previous example also illustrates a tendency of positioning others as masters, someone to look up to and perhaps imitate, in CoP terms: a joint enterprise.

In the spectrum of novice–master, another tendency is for the teachers to unanimously talk about themselves as experts when it comes to assessment of pupils' practical knowing in their own domains. For example, we interpret it as a master's voice when one of the teachers says: 'While a pupil certainly may fool me with skilled speech after having studied some theory, when we move on to practical tasks, it will prove [what the pupil knows]' (M3, 45:04).

A master's voice can also be noted as the teachers describe in detail what physical action is needed to manage what is to be known in their own practice. For example, the members can indulge in describing how to cook asparagus, or how to connect electrical cables safely *and* visually attractively, or how to fold selected pieces of paper into a book shaped as a carousel. We understand such contributions to the community as building shared repertoires of practical knowing – a joint enterprise. As underscored, the members represent different domains. This premise seems to call for the explicit making of domain-specific tacit knowing in interaction about what is to be known in certain classroom exercises.

Professional identity

The community members describe themselves as reflective practitioners, which we interpret as building professional identity in a CoP sense. The teachers position themselves as specific characters who indulge in the community's

development process, notably foremost for individual purposes, as underscored earlier. However, the professional identity also encompasses development of a more collaborative nature, such as plans for future collaborative projects between vocational and arts teachers. Thus, the members seem to develop shared repertoires about something that previously went somewhat unnoticed. At the same time, they construct a professional identity in the sense of seeing themselves as a character involved in an ongoing developmental journey, lasting even after the specific TC has come to an end.

Yet another aspect of constructing professional identity is the cultivation of shared repertoires about the members' (excellent) competence of assessing pupils' practical knowing in their own domains. Even if there are limits for a detailed understanding of the subject-specific assessment on a cross-programme basis, the overall picture is something like 'We know how to assess'.

Several mentions that indicate awareness of differences between the local culture of the programmes represented in the community can also be interpreted as building professional identity, from the perspective of learning more of co-existing cultures at the same school. An example is that in the culture of arts classes (according to vocational teachers), the pupils seem to take greater pride in their own products than what vocational pupils do, which is elaborated on as follows:

The product was something that they had evaluated and questioned, and through that owned their own product in a completely new way, signalling some sort of culture with historic roots ... some tacit knowing and things you have mediated to them before. (P1, 12:29)

Finally, part of cultivating a professional identity in the present community is the focus on language, in which the members develop shared meanings of the importance of teaching domain-specific terminology.

Relationships

While it is possible to find examples of criticism oriented towards the planning of the project, the heads of the school, or Skolverket, it is very rare to find examples of direct criticism of one another's teaching. Instead, esteem is strikingly common. We see the building of relationships through esteem as another key feature of this CoP. Esteem can be addressed to the community in general, as in this summary of the podcasts: 'It really sounds like everyone is passionate about their subject and it must be like gold for the pupils' (M1, 18:32). Pretty often, esteem is oriented towards the project and its potential for development, which is captured in ideas like: 'really fun to see other practices and then so fantastically fun to realise that there are quite a lot of similarities' (M1, 05:33). In other words, through observation of the strange you can gain new perspectives on your own practice. Esteem can also be addressed individually,

as in 'You were so good at promoting [every single pupil] because there was perhaps differing levels of quality in what had been produced' (P1, 13:51).

Summary of results

To summarise our results, the members of the TC seem to be involved in an ongoing construction of a CoP, where the teachers focus on their individual development scaffolded by collective thinking. The teachers position themselves as specific characters who indulge in the joint enterprise of professional development. When given freedom to choose topics and elaborate on them, the community embraces complex reasoning on professional identity, interwoven aspects of language and practical knowing, and the overarching importance of classroom relationships. It is striking that in the community under study, the teachers do this without challenging someone else's statement or questioning each other's practice. Specific features of the CoP are also an interchangeability of novice-master roles, including the master's expertise in assessment of domain-specific skills. Furthermore, the mutual engagement for the development of teaching practices seems to be ongoing, even after the TC has come to an end. A cornerstone in the ongoing construction of this community of practice is esteem of each other's competence.

Discussion

The aim of the present study is to gain knowledge about how professional development is constituted in a specific teacher community, within the context of teaching and assessing practical knowing. In the present chapter, we start by discussing methodological issues before moving on to discussing the results.

Method discussion

Our ambition is to present a study with good quality, in line with Larsson (2005). We have strived to give a rich presentation of our case, while at the same time presenting our results in a structured manner. This balance is visible in the various approaches to the different kinds of analyses used. For example, the most inductive part of the study (step 2) has a more thorough presentation of the questions used for analysis. A rich description has sometimes been prioritised over structure. This is a consequence of the need for the study to have a solid empirical foundation to prevent our conclusions – especially when contradicting previous research – from seeming vague. Larsson (2005) argues that a solid empirical foundation could create tension with the pragmatic validity of the study. We argue that our study has both a thick description and enough pragmatic validity to be of some relevance for changes in the professional development going on at schools.

Consideration was given to what roles we, as researchers, would play in the meetings with the teachers before the study commenced. There was a deliberate strategy to focus on the teachers' own thoughts about teaching and to strive for equality between teachers and researchers in the meetings. We have been genuinely interested in learning what the teachers themselves choose to discuss. Our role in the discussions was intentionally limited in pursuit of high validity for the study. One of us primarily had an insider perspective and a chairing role in the meetings, that is, allocating turns, affirming, and managing practical matters. The other had an outsider perspective, asking for explanations and examples, and promoting in-depth discussions without introducing new perspectives while doing so. Such promotion occurred rarely and were connected to the researcher's sense that the discussion was moving within areas that are relatively unexplored in previous research, such as the use of the five senses in teaching. However, the general picture is that the teachers willingly discussed among themselves with very few guidelines from us.

The role of the moderating researcher was positively reinforcing, while there are teacher statements which suggest that the other researcher's role was sometimes perceived as more questioning or critical. For instance, 'Yes, that's how I do it. Any questions, [researcher's name]?' (M1, 26:33). This comment was made in a playful tone, reflecting the positive discussion climate. However, it also highlights that participants might have perceived inequality in the relationship between the teachers and researchers in questions posed by the researchers. They may have felt obligated to respond (akin to an interrogation). We saw no further signs of this kind of inequality beyond this comment, but we are aware that power dynamics always pose a risk to the trustworthiness of participants' statements (Annerberg, 2016; Göthberg, 2019; Hammersley & Atkinson, 2007).

We have aimed to enhance trustworthiness and reliability through transparency in our analytical procedures. Our initial analytical approach, based on predefined concepts in Dimenäs and Taflin (2018), has been both rewarding and limiting. Specifically, the two categories (topics) of contextualisation and generalisation required repeated discussions among us researchers before we comprehended and used them equally. Also, the more inductive content analysis (Alvinus et al., 2023) in the second step of the analyses of how teachers relate to one another was employed to capture phenomena that were occasionally evident during ongoing meetings, but necessitated systematic exploration using transcriptions as a foundation. Through this analysis, patterns emerged that could be further explored through the theoretical lens of CoP.

Discussion of the results

By delving deeply into what a specific teacher community discussed and how they did so, and viewing this through the theoretical lens of Communities of

Practice, we aimed to explain the processes involved. Overall, we have achieved our objective to generate new insights about a professional teacher community's practice through our case study. While general conclusions cannot be drawn from a single case, our findings – in comparison with previous research – suggest that there is reason to question the organisation of professional development initiatives for teachers. We will discuss our findings in relation to previous research through three issues: *i*) the absence of critical inquiry towards others, *ii*) individual responsibility for professional development, and *iii*) the design of the TC project. We recommend continued research in all these areas and note that Skolverket's report (2024) supports our questioning of the design of professional development for teachers that has dominated Swedish schools in recent years.

Previous research asserts that critical inquiry is essential for driving development (Brodie, 2014; Sülau, 2019; Timperley, 2019; Vangrieken et al., 2017). However, criticism or questioning of each other's practice is absent in the studied TC. Instead, the teachers are appreciative and seek connections, and identify desirable teaching methods and approaches in their colleagues' teaching. They find the peer observations highly rewarding, a perspective supported by extensive research (e.g., Cochran-Smith & Lytle, 1999). The cautionary note on the risk of using peer observation (Vangrieken et al., 2017) is not relevant in this TC, with esteem as an important feature. From this, we conclude that the pleasant tone, regardless of its origin, does not hinder the teachers' learning and development. 'I want to excel at this, just as I see you excel' seems to be a unifying stance. An example of the complexity of teaching explored within the TC is represented by one teacher's report of how interwoven relationships between the word and the action were staged in the classroom. The teacher spoke of how to enact the dialectic influence that action has on the word and the word has on the action in the organisation of teaching. Hence, the results of our study do not fully align with the research cited initially in this paragraph on prerequisites for deepened collegial discussions, since our study clearly shows that critically inquiring into other teachers' teaching is not a requirement for development in the current TC. Beyond demonstrating this, we also posit that the friendly tone may serve another clear agenda: creating a platform for unpacking teachers' experiences. We want to underscore that this community met for a semester before the actual data production started. It can be assumed that the discussions then, in which individual mastering of practical skills surfaced, contributed to the respectful atmosphere we outline.

Wermke (2013) problematises the strong government control of Swedish teachers' work, and argues that strong control emphasises teachers' own experiences as a source for CPD. The same reasoning can explain why our teachers value peer observations. Wermke goes on to say that strong government control reduces the need to act as a unified collegium in terms of didactic

decision-making. In the present case, all participants contribute to creating a community in which they can act as a master as well as a novice, and act independently in didactic decision-making.

Our study demonstrates that the teachers take responsibility for their individual learning and development, but not for that of others. A possible explanation is that the individual driving force and motivation is crucial for teachers' professional development (Andersson et al., 2018; OECD, 2019; Vangrieken et al., 2017). Peer observations provide concrete role models, which can enhance motivation for the change of teaching practices, since there is an option in terms of what to appropriate, compared to being told by someone else what you need to change. In a similar vein, comparing with the results of Aamodt et al. (2016), which state that VET teachers collaborate less with other teachers and have higher self-confidence, a community that lets the teachers maintain their mastery status may very well be conducive to learning and development. Even if the community members occasionally adopt a novice stance, their self-confidence is never threatened.

A second possible explanation relates to the prevailing perception that the teaching profession equals continuous improvement. Teachers' individual *professional accountability*, for example the expectation to continuously improve, can be traced back to the New Public Management discourse (cf. Annerberg, 2016; Englund & Solbrekke, 2015). However, the expectation of continuous improvement do not go without challenges. It can create stress. In our study, while responding to accountability demands, the teachers critically distance themselves. They say that change requires time, and act accordingly, which could be considered a stand more adapted to *professional responsibility*, at some distance to the stressful perpetual wheel of development. The present study provides substantial evidence that the teachers demonstrate great responsibility in relation to their own development through their discourse about being on an ongoing journey, their voluntary participation in the project, and their expressed curiosity about the teaching practices and didactic ideas of others. This drive for development may override the need for predefined discussion questions or an agenda formulated by someone other than the teachers themselves.

Our results also tentatively suggest that the heterogeneity of the group in terms of domain has been beneficial. Previous research states there is a risk associated with too much heterogeneity, as it may conflict with the vulnerability needed to engage in development (Vangrieken et al., 2017). Our results indicate that, with practical knowing as a fruitful lowest common determinant, the teachers' level of vulnerability is sensitive to the tone of esteem and the enabling of master positions within the TC.

Beyond esteem, autonomy, and personal motivation, there are other aspects of the current model of professional development which we want to emphasise.

This study does not aim to evaluate methods used in CPD, but we still want to comment on the use of peer observations and podcasts as methods to capture teachers' classroom experiences. The approach is based on theoretical reasoning by Alvunger and Adolphsson (2016), where we have replaced written texts with podcasts. Our study illustrates that these methods are effective in stimulating reflection and development. The current community provides a learning and development-oriented culture in line with Leonardsen (2021).

Although the literature read during the initial phase of the project was carefully selected and had specific content, the start of the second phase (when data production started) allowed teachers considerable freedom to discuss topics relevant to their observations. This relative autonomy distinguishes this study from most others presented in previous research. A concluding remark concerns the design of teachers' professional development projects. We suggest considering alternatives to overly structured, uniform CPD packages with pre-set goals, methods, and questions to discuss.

Endnote

¹ Sülau refers to:

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