



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 Aakernes**. 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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