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; Isacsson & 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-á-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-prepatory 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. Horisontally 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-prepatory 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 if 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 directedtowards 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 proceeded 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.

Acknowledgements

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