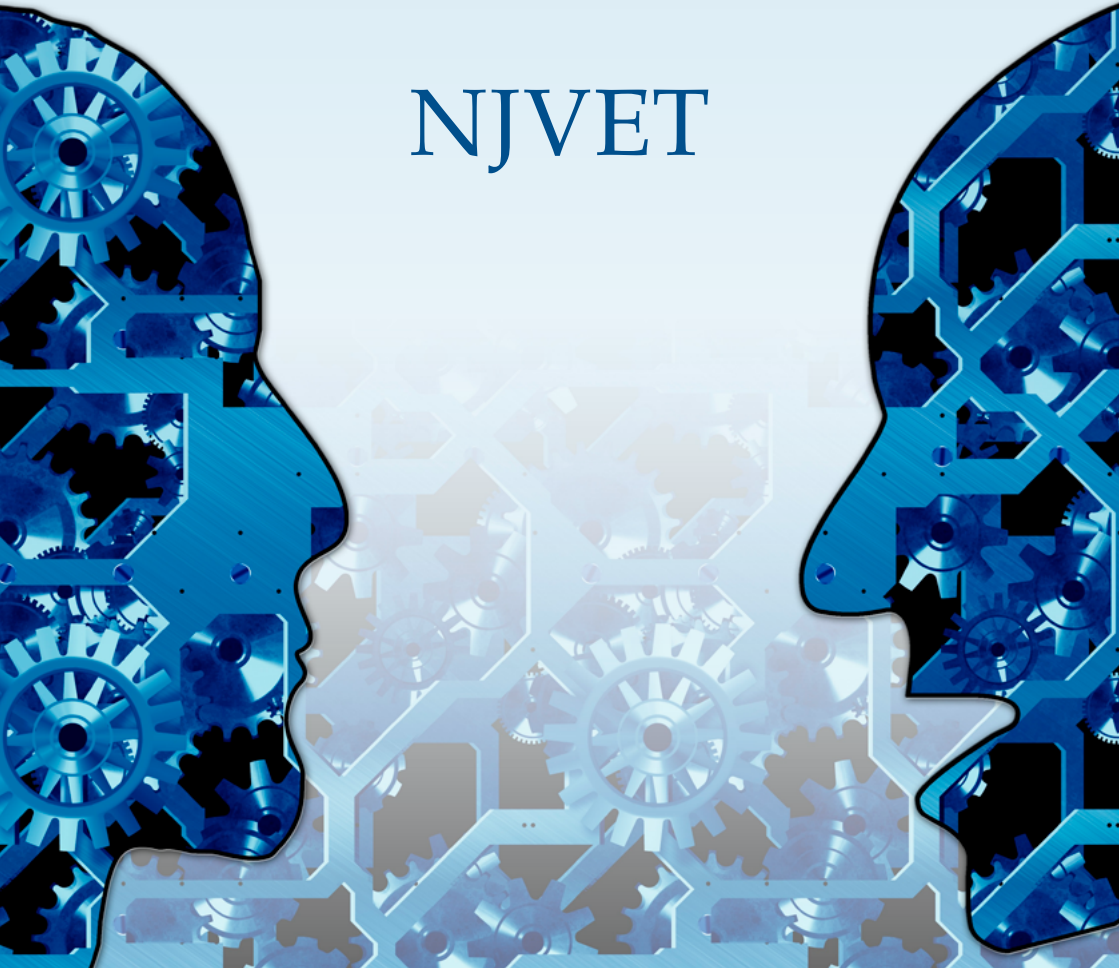*Nordic Journal of Vocational Education and Training*

NJVET

Table of Contents

Editorial

Editorial: NJVET and the NordYrk network
Per Andersson, Song-ee Ahn, Hedvig S. Johannesen, Johanna Köpsén and Arnt Louw ... iii

Peer-reviewed articles

Editorial: NJVET and the NordYrk network

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NordYrk is a Nordic research network with its focus on vocational education and training. Our journal is published on behalf of this network, and the connection between *NordYrk* and the *Nordic Journal of Vocational Education and Training* is strong. The central activity in the network is the annual conference, which is arranged somewhere in the Nordic countries. In the beginning of June 2022, it was finally time to meet the network again. In 2020, the conference was canceled due to the pandemic, and in 2021 it went online for the same reason. Thus, meeting for the NordYrk Conference 2022, which was arranged in Norrköping, Sweden, by Linköping University, was long awaited. Interesting keynotes, amazing social activities, the surroundings in the 'industrial landscape' in central Norrköping, and not the least all presentations by participating researchers made the conference a memorable experience for everyone who was able to get there. One initiative worth mentioning is that a PhD student network, within *NordYrk*, was organised during the conference, to improve connections among Nordic PhD students in our research area. Now we are looking forward to the next conference, which will be held in Bergen, Norway, 7–9 June 2023, hosted by the Western Norway University of Applied Sciences. Until then – keep reading all new contributions to our journal to remain updated on Nordic research on vocational education and training!

This issue includes five research articles, and we are glad to see an increase in articles from Finland in NJVET. Three of the five articles in this issue are from Finland, and two from Norway.

Per Andersson, Song-ee Ahn, Hedvig Skonhoft Johannesen, Johanna Köpsén & Arnt Louw

Five research articles

The first article is written by **Niklas Rosenblad, Birgit Schaffar,** and **Erika Löfström** from Finland. In the study *Immeasurability loss? An analysis of the impacts of accountability measures on counselling within VET,* the authors focus on the practice of counselling. They describe how the framework of accountability constitutes the counselling practice in VET. Based on observations of guidance counselling and interview materials, the authors elaborate on how the teachers and counsellors understand counselling and perceive the opportunities and challenges in it, and they are particularly interested in the tension between the immeasurable and the targets of measurement in counselling practice. The results show that quality assurance forces the practitioners to focus on the measured outcomes, with the result that the human interactions and conditions for meaningful learning in counselling are marginalised.

The second article is from Norway. In *Å tilrettelegge for elevenes yrkesinteresser: En surveystudie av yrkesfaglærernes kompetanse i yrkesdifferensiert opplæring* (A survey study of vocational teachers' competence for differentiated teaching adjusted to students' vocational interest), **Rønnaug H. Lyckander** reports on a comparison of teacher preparation in the two different educational pathways for vocational teachers in Norway: the bachelor programme, and the postgraduate programme in education. Based on cross-sectional survey data collected among vocational teacher graduates, the article explores the competence vocational teachers develop during their teacher education. The article indicates that the bachelor students experience being significantly better prepared for teaching in broad courses than the postgraduate students. Thus, it is discussed how differences and similarities between content and practice arenas in teacher education can explain teachers' experiences and whether both teacher programmes develop the competence needed to teach in the broad structure of Norwegian VET.

The third article, the second contribution from Finland, is written by **Piia Kolho, Elena Oikkonen,** and **Timo Pihkala**. In this article, *Entrepreneurship education practices in VET: The roles of the teacher and the local region*, they have focused on entrepreneurship education in VET. Entrepreneurship may be viewed as greatly relevant for VET students as many of them are likely to become self-employed entrepreneurs. However, previous research has shown that entrepreneurship, as a competence, has been challenging for VET teachers to address. Teachers in VET are largely oriented towards educating professional skills, not including entrepreneurial aspects. The authors have used quantitative methodology to analyse the versatility of entrepreneurship education practices in Finnish VET. The study investigates what role the teachers play forming the practices of entrepreneurship education. However, the study also investigates what role relationships with local business play and the findings indicate interesting results on how the regional context influences these practices.

Flerkulturalitet i opplæring av helsefagarbeidere (Multiculturalism in the training of health care workers) by **Oddhild Peggy Bergsli** is the second article from Norway and the fourth contribution in this issue. Bergsli puts focus on the need for multicultural sensitivity and communicative competence in health-care work in the multicultural society, and if and how such competence is developed in upper-secondary vocational education. The study, based on interviews with vocational teachers, shows that multicultural issues are rather absent in education and that the multicultural topics rarely are linked to the professional tasks, such as health-communication and diet. Thus, the conclusion is that relevant multicultural issues must be implemented in the vocational education for health workers to be prepared for a multicultural professional life.

Finally, **Sami Löfgren, Liisa Ilomäki,** and **Auli Toom** from Finland have conducted the study *Teachers' perceptions on relevant upper-secondary vocational graduate competencies and their development*, which thus is the fifth article in the issue and the third from Finland. This article explores the teachers' views of employability and competencies in the context of initial Finnish vocational education and training. The study methodology consists of semi-structured qualitative interviews with inquiries directed at a sample of teachers in engineering and building vocational subjects regarding competencies valued as pertinent for vocational graduates. The results show that teachers identify main areas of competencies of the vocational graduates. The first area of competencies is domain-specific knowledge and work-related attitudes as indicators of expertise and employability among vocational graduates. Secondly, the study respondents reflect on how self-directed learning sets new requirements of vocational teachers' competencies. Thirdly, it is argued that vocational education and training should balance between work-based and school-based learning, arguing that schools could be better suited to provide equal rights and opportunities for students.

Immeasurability loss?
An analysis of the impacts of accountability measures on counselling within VET

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Abstract

Comparative measures of learning outcomes and professional actions are set out to indicate accountability of VET. Individualisation and fragmentation of education emphasise counselling of students as support for their learning. The purpose of the article is to identify how counsellor and teacher practitioners perceive opportunities and challenges in merging their pedagogical and fundamental conventions of their work with structures and frameworks of accountability constituting their practice. Theoretically the study is influenced by socio-cultural perspectives. The analysis follows an abductive approach, reporting on the results from ethnographic observations of guidance counselling (N=29) within VET and subsequent interviews (N=12). We ask how the tension between the immeasurable and measurable contextualises within counselling, and how counselling is construed by counsellors and teachers. The results suggest adherence to quality measures in VET exchanged processes of human interactions and agreements with assumptions of outcomes. The effort of reaching the measures led to failure in achieving the purpose of what the targets are meant to underscore, portraying a disillusion of control. Accountability addressed a critical point concerning responsibility and evoked professional ethical dilemmas for the practitioners. Certain categorised actions of counselling processes were made externally visible by documentation but depleted counselling as learning processes inwards.

Keywords: vocational education and training, guidance, object-informed counselling, counselling-process, professional responsibility, competence, managerialism

Introduction

A central aim of managerialist reforms of public sector administration has been to give more institutional autonomy in exchange for measurable evidence of quality (Savoie, 1995). These measures are set out to indicate effective use of financial resources, indicating accountability of public organisations, like education (Biesta, 2010). Looking at vocational education and training (VET)[1] through the lens of Hood's production mode (Hood & Peters, 2004), two parallel trends can be observed. The first involves approaches of competency-based training (CBT), where production focuses on optimising certain skills, categorised as competence, which outcomes are readily observable and therefore measurable (Allais, 2014, 2017; Billett, 2014b; Raggatt & Williams, 1999). Due to a global shift toward qualifications framework, CBT is today operating in ways that are interconnected to control-systems generating internationally comparative financial incentives (Allais, 2014, 2017). The second trend is the influence of managerialism on educational interpersonal work. That is, management by measuring outcomes of work, coined as 'New Public Management' (NPM) by Hood (1995). NPM switches focus from work-processes and content to introduction of measures of work, and the fulfilment of measured criteria (Ball, 2017; Hood & Peters, 2004).

In parallel with reforms toward managerialist governing, individualisation of learning has expanded rapidly (Biesta, 2010), and educational guidance counselling (later counselling) is seen as an important support for students individual learning and development (Mikkonen et al., 2017; Vehviläinen, 2001, 2014). Within counselling of VET students, impacts of CBT and NPM have become apparent (Rosenblad et al., 2021) and pedagogical concepts are introduced to portray the growing post-reform field of counselling. Yet, little research has looked at counselling within VET as support for learning. The purpose of the article is to identify how counsellor and teacher practitioners perceive opportunities and challenges in merging their pedagogical and fundamental conventions of their work with structures and frameworks of accountability constituting their practice.

Background: VET reform and managerialist implications on interpersonal work VET reforms implemented in Finland during the past decade (about 2008–2019) have aimed at improved levels of skills, employability, educational productivity, financial efficiency and effectiveness (see Finnish National Agency for Education [EDUFI], 2015; Finnish Ministry of Education and Culture [FMEC], 2017b, 2020). Against the curriculum-based VET introduced in the early 1990s a contrast toward individualised CBT and qualification requirements (QRs) (FMEC, 2017a) occurred as sharp and prominent (Isopahkala-Bouret, 2013; Kontio et al., 2019). The effort to commit individual progress to the framework of QRs is materialised within the 'personal competence development plan' (PCDP) compulsory for all students in VET (FMEC, 2018). Accordingly, constraints of the

new VET have become a question of individual counselling of the students. By terms of support for self-efficacy and self-governing (Nokelainen et al., 2018), accrediting of prior knowledge (Andersson & Fejes, 2011), and 'meeting of the students needs' (FMEC, 2017b) by counselling have been widely introduced in VET (EDUFI, 2020; cf. Onnismaa & Pasanen, 2020). Students' counselling has evolved into a distinct area and, as a responsibility stretching beyond the immediate system of VET, toward compulsory education, career services, unemployment agencies, and the labour market (EDUFI, 2021).

Biesta (2010) argues that the categorisation of outcomes of educational work as 'ends of professional action' has led to certain measures of actions becoming comprehended as evidence of effective intervention. In complex systems, measures are indeed to some extent important indicators of development or change, but an overfocus leads to problems, fading out fundamental educational aspects beyond measures of 'desirable actions.' Also, he argues that an over-rationalised measuring outdates democratic discussions about 'what education is for,' and what 'good education is' as unnecessary, because concerns about values informing what we measure cannot be derived from what is measured (Biesta, 2010; Schaffar, 2021). Essential parts of educational work are merely not separable from sensibility, reflection, and situational judgement. If the rational and measurable begin to constitute overall means of interpersonal work, here specifically educational work, they obscure what is valuable to do under situational contexts and blurred circumstances (Bornemark, 2018a, 2018b; Schön, 1983; Tyson, 2017).

Prior research on counselling within VET

The meaning of counselling is normally viewed as a helpful tool for the individual in difficult situations and to support proceeding through fragmented institutional systems. Prior research has shown that counselling sometimes is added as individually applied solution for problems that are structural to their nature (Billett & Pavlova, 2005; Brunila et al., 2020; Onnismaa & Pasanen, 2020; Peavy & Auvinen, 2002). For instance, Brunila et al. (2020) focused on projects directed to young people 'at risk.' They identified counselling taking place as behavioural governance, forming the 'individual self' becoming the smith of own successes or failures, such as employability, accepting own poverty or the oppression of others, despite the fact that unemployment, fatigue or exclusion remains a structural problem of labour, society, and policy (see also Brunila, 2013; Brunila & Lundahl, 2020; Järvinen, 2020; Masoud et al., 2020). The expansion of counselling can also be explained by promises of modern individualism, including phenomena such as self-development within a marketised self-fulfilment project. Educational counselling, however, is mainly expanding due to envisioned affordances in systems where individuals do not reach desired levels of success without individual support and advice (Vehviläinen, 2014, p. 34f).

Vuorinen and Virolainen (2017) emphasise that attempts to develop counselling systems within VET should recognise the disjointedness and long-term effects of counselling. Mikkonen et al. (2017) show that students' responsibility of requesting guidance might be crucial for how learning at the boundaries of workplaces and VET turn out. As a result, courage in taking initiative and commitment to guidance processes may bear consequences for development of expertise in a longer perspective. Workplaces are committed to different requirements and pressure of production, which form guidance, and the results of learning, in unpredictable ways (Mikkonen et al., 2017). Further, Billett (2014a) has described the complexity of how subjective learning arise and develop at workplaces, and the opportunities or challenges of knowledge transfer to new situations through guided processes of everyday work activities and intertwined interactions within VET. Billett (2006, 2009, 2018), Jørgensen (2008, 2015), and Bohlinger et al. (2015) have considered guidance as bridging school-based and work-based arenas, showing their diverse learning cultures, shedding light on the uncertainty of individual agency depending on occasional aspects where vocational 'career' seldom was a matter of choice. Yet, counselling in terms of career-guidance yields support of instrumentalities like career skills and career 'competencies' [sic!] that extensively have been introduced to VET (e.g. Bårdsdatter Bakke, 2021; Hooley & Rice, 2019; Hooley et al., 2013; Magee et al., 2021; Moreno da Fonseca, 2015; Okolie et al., 2020).

Research on counselling has often emanated from academic disciplines through theories and methods legitimate for the disciplines in question, which is the reason for its fragmented nature (see Vuorinen & Sampson, 2002). There are cross-disciplinary exceptions indeed (as Onnismaa et al., 2000a, 2000b, 2004). Accordingly, research focusing on (un)employment and transitions from VET to employment (e.g., Brunila & Lundahl, 2020) have questioned if counselling can be considered as support for emancipation or should just be seen as a gearwheel in the mechanism of power structures. Most likely, it is both (see Onnismaa & Pasanen, 2020; Vehviläinen, 2001, 2014).

Object-informed counselling processes

Vehviläinen (2014) considers counselling interactions as taking a stance from sociocultural objects of focus, moving towards their reaching or change. When objects are defined and agreed upon through collaborative and dialogical interactions, they can support the coordination and structuring of counselling processes. As a pedagogical process, subjective and social motives are connected to the objects of focus, and therefore encourages counselees' taking responsibility for their own actions. That responsibility materialises as a joint effort in connecting to the world. In a narrower sense, the core process of counselling can be shaped as serving a meaningful purpose to the counselees' own life, supporting learning and development of agency. This leads to possible redefinition of objects and enable

the definition of new ones over time (Eteläpelto & Paloniemi, 2013; Vehviläinen, 2001). Within Finnish VET, counselling is committed to roles of study coordinating and, as a 'responsible co-author' of students (individualised) 'competence development.' These kinds of roles are extended over multiple intertwined activity systems (Engeström, 2014), like work-based and school-based environments (Jørgensen, 2008). The objects are shifting between short- and longer-term focus within counselling processes, where they function as intellectual and communicative artefacts (Säljö, 2014). Objects can, thus, be considered meaningful for the planning and proceeding of the counselling – and learning – process, and effective tools for the institution employing counselling. Such considerations of object can also connect the process to social and subjective meaning from where agentic actions emerge (Billett & Pavlova, 2005) for both the counselee and the counsellor. Vehviläinen has identified counselling actions taking their stance from situationally followed lines of action, that is orientations, such as support, problem-solving, and exploration of experiences. These can further be distinguished within proactive and reactive methods that can support the structuring of the counselling seen as process driven (Vehviläinen, 2014). These methods portray process-driven counselling at the boundaries of systems, which shifting objects are 'boundary objects', and the collaborative processes, through which the objects are found, as boundary crossing (Akkerman & Bakker, 2011). A fundamentally different way of comprehending counselling would be as merely a coaching tool with aims to reach specific instrumentalities, following given schemes, and via fixed conditions be assumed as an efficient and effective production-driven procedure rather than a process (Vehviläinen, 2014, p. 111ff).

The diverging expectations from the systems connected to counselling generate different contradictions (Engeström, 2001, 2014). There are discrepancies between setting fixed outcomes of CBT (Allais, 2014; Wheelahan, 2009, 2015) and to regard these as constituents of learning processes. There is a contradiction emerging between the measures of action as quality and the comprehension of innovative work processes (Ball, 2017), visible as, e.g., paradoxes of NPM (Hood & Peters, 2004). Vehviläinen (2014) points out that any contradictions of the counselling process needs to be kept visible if the supervisor is to remain at the service of the counselee's learning.

From this perspective, to be at the service of the counselee's learning, counselling as pedagogical practice within VET is not much researched. Moving toward individualisation, accountability and managerialist governing of both education and professional work we explore the compatibility of the above notion of counselling with the global trend in VET. For us, this becomes a question of (im)measurability.

To review the tension between the immeasurable and measurable dispositions, we ask:

1. How is the tension between the immeasurable and the targets of measurement contextualised in counselling?
2. How do counsellors and teachers construe counselling?

Method

The study is part of a design-based research (DBR) project (Rosenblad et al., 2020). The DBR (see also Anderson & Shattuck, 2012) began (2018) through identifying needs of research-based knowledge concerning counselling within VET. Out of a total of 96 VET schools in Finland, two organisations participated in the DBR. After initial information sessions, twelve (N=12) counsellor and teacher practitioners consented to participate in the study; four and eight from each school, respectively. The criteria for participation included defined responsibilities in counselling committed to responsibilities within students' 'personal competence development plan' (PCDP) which is implemented in Finnish VET due to the reform toward CBT (FMEC, 2018).

The consent was continuously monitored throughout the process to ensure that participation was truly voluntary. That is, research participants' right to give informed consent, withdraw consent, or continue consent. This concerns all the persons; practitioners and students observed and/or interviewed.

The participants were informed about how data anonymisation and data storage would be managed, and about methods, reporting and publishing. At the meetings held at the beginning and end of each DBR cycle, preliminary results were fed back in anonymised form along with discussions to support the participating organisations. No other incentives were used. Avoidance of any harm was a priority in the research. The study did not involve elements that require an ethics review in Finland (i.e., research involving intervention in the physical integrity of research participants; deviation from informed consent; research involving participants under the age of fifteen being studied without parental consent; exposure to exceptionally strong stimuli; risk of causing long-term mental harm beyond that encountered in normal life; or security risk) (Finnish National Board on Research Integrity, 2019).

The analysis process unfolds as an abductive approach put forward by Timmermans and Tavory (2012). The method is argued as suitable where sufficient experiences of the observed practice and knowledge of theories are used to produce new insights based on unexpected empirical findings. The method involves a moving of focus back and forth between existing theories and the produced data. Existing theories are used to understand observations, and new theory can

be constructed where existing theories cannot fully explain an observation. Accordingly, the existing theories are strengthened and the gap between theory and empirical evidence decreases (Timmermans & Tavory, 2012).

Research-design and data

Within cycles of DBR, two complementary datasets were produced by Niklas Rosenblad during summer and winter 2019–2020. The first dataset (D1) was based on ethnographic observations (Charmaz, 2014, pp. 35–54) and the second (D2) on semi-structured interviews (Kvale & Brinkmann, 2014).

The first dataset (D1) was produced during summer and autumn 2019. This consisted of 29 participatory observations of counselling opportunities including discussions and planning in which counsellors, teachers and students participated to set up or update the students' PCDPs. The data (D1) comprise 78 pages of transcribed notes. The observed counselling sessions lasted about one hour each. Sometimes, in addition to a student and the responsible counsellor, a VET teacher or special education teacher also participated. Two group counselling sessions of three- or four-hours' duration were also observed. In these, a counsellor, a teacher, and a special education teacher participated together with a group of 20–30 students. Occasionally Rosenblad also participated in informal discussions, lunch or coffee breaks with the informants and her/his colleagues. The researcher's focus during the observations was on the constitution and collaborative emergence of counselling, and which kind of themes were raised in the counselling sessions, by whom, and what kind of further agreement were made.

Due to a thematic analysis approach, looking for relationship between object-informed counselling and the data D1, eight themes were identified. These originated from the data as either directly, or as informed by, e.g., Vehviläinen (2014), Andersson and Fejes (2011), and Allais (2017). The themes were, Autonomy and wishes about future, Counselling culture, Counselling process, Interaction and collaboration, Stigma and personality, Psychosocial support, Structure and qualification frameworks, and Prior knowledge and earning of competence. As a following stage of the analysis, semi-structured interview questions were construed based on the themes. The interviews (N=12) were conducted during winter 2019–2020 and lasted about one hour each. During the interviews, the interviewees were first asked to describe a typical workday during the past six month. Second, they were asked to explore meanings within the identified themes from D1. Lastly, the participants were asked what they perceive as 'good' counselling, and whether such can be provided in their every-day work and to elaborate in cases of negative or positive answer. The interview data (D2) consisted of 120 pages of text transcribed from voice recordings. The Atlas.ti software was used to aid the thematic analysis process.

In finalising the analysis process, the data (D1 and D2) were handled as an entity. Thirty-one themes emanated from the data either directly through the conceptual model of object-informed counselling (i.e., Vehviläinen, 2014) or as abductively informed by our readings of Biesta (2010), Ball (2017) and Wheelahan (2009, 2015). In the following analysis process, the themes were explored by returning to the data, analysing the overlap between themes, their relations to each other, patterns found in these relations, and their resonance in the theories. Examples of the most representative themes are, Empathy, understanding and agreements (41 quotes); Structure of PCDP (34); and Mechanic performance (work) (26); PCDP as documented process (16). The themes are listed in Table 1.

Table 1. Abstracted themes, number of themes (n) within the abstracted themes, and themes coded in the data (D1 and D2).

Abstracted theme	Themes (n)	Theme
i. Instrumental control & quality assurance	7	Comparative skills; Competency-based; Detail measure and control; Instrumental (learning outcome); PCDP as documented progress; Quality (-assurance, data production); Tools & Instruments.
ii. Targets of measurement & expectations of causality	9	Accredited knowledge and Assessment; Administration, Measure and data production; All the rest is just 'counselling'?; Career as 'chain of choices'; Categorised work-duties; Information as duty of counselling (one way comm.); Information management system[2]; Mechanic performance (work); Structures of PCDP.
iii. Immeasurable means	15	Contradiction and distortion; Counselling as life management; Counselling in the moment!; Counselling carries and mirror processes; Despair; 'The' IMS[2] model of counselling; Drop out; Emotions, motivation and meaning (learner); Empathy, understanding and agreements; From experiences to knowing; Professional team; Quality (in practice); Sensuality, judgement, 'values about good counselling'; Subject to collective and back; Subjective needs (genuine).
Totals (n)	31	

The analysis was followed by a process in which we abstracted the themes. Here, it became increasingly clear that the tension between immeasurable and the measurable was mediated through the production mode (Hood, 1995; Hood & Peters, 2004) by learning outcomes, more precisely between processes enabling learning outcomes on one hand, and across operations within interpersonal work processes and measures of its actions on the other. This process resulted in the recognition of three abstracted themes: (i) Instrumental control and quality assurance, (ii) Targets of measurement and expectations of causality, and (iii) Immeasurable means. The third abstracted theme emerged from and within the first

and the second. We found the third abstraction escaping systematic actions of sorting, reminding of latent tendencies. The Immeasurable (iii) seems therefore to go underneath the other abstractions (i and ii), sometimes questioning their constitution. Although the Immeasurable (iii) is comprehensively represented throughout the data (see Tables 1 and 2), attempts to thematise their emergence occasionally tend to make expression of them disappear.

To construe an adequate level of consensus of the key observations, we discussed at some length five interview transcriptions that were identified as particularly interesting, fruitful, or troublesome. This procedure worked to validate interpretations and our agreement on the main findings. We provide excerpts from the data to illustrate the results. In these excerpts we have used the following abbreviations: cut-off word<; emphasised word; removed part inside quote [...]; and [contextual/situational belonging].

The frequencies of coded themes within the abstracted themes and the data (D1/D2) are presented in Table 2.

Table 2. Absolute frequency of quotations emerging throughout the data (D1/D2). Abbreviations are Gr=Groundedness of themes (number of quotations coded by a theme) and GS=Number of themes in the abstracted themes (i/ii/iii).

	D1 Gr=88	D2 Gr=175	Totals
i: Instrumental control & quality assurance Gr=47; GS=7	27	20	47
ii: Objects of measurement & expectations of causality Gr=94; GS=9	28	66	94
iii: Immeasurable means Gr=134; GS=15	38	96	134
Totals	93	182	275

Results

Control and quality assurance of personal competence development and qualification

Let us begin with setting the scene using an excerpt from the researchers' field-notes:

> About twenty students, a counsellor, a teacher, and me (Researcher) are gathered together in a room. The topic is the students PCDPs and qualification, within which some individual choices of units can be made. How these units are selected in the actual administration system is now demonstrated. Emerging from what is visualised on the white board: the qualification requirements delivered with five initial

> words: 'This is your Holy Grail! If you want to seek accrediting of a qualification unit or a moment in such unit, the normal proceeding concerning changes in your PCDP is the following: […]' (Observation 28)

The vocation-specific qualification requirement (QR) is setting conditions for counselling (via the PCDP) by its stated learning outcomes. As is shown in the data extract, these targets constitute evaluation and accreditation processes of prior knowledge (see Andersson & Fejes, 2011). Together these two are constructing the 'path' of qualifying by pointing at competence yet to be gained. Practitioners perceive this path as limiting possibility for interaction with their students, as described by one counsellor:

> Well, it comes from above, these you know, thoughts of that you can control and govern this and that. And if you're not accepting being a subject of this control, and if you don't fill out the forms … then you [the school] won't get any money. And that kind of picture. But that, I think, it's not enough<. It's not it, that gives quality. Certainly, there is another reason why this is strictly controlled and managed. (Interview 5)

It was perceived that the qualification path according to the PCDP as a top-down driven process related to financial incentives and measures rather than showing the condition of VET's quality, or the quality of learning as what they pedagogically consider quality to be about. A counsellor illustrated this as follows:

> I've always said that the important thing is to build a good whole for the students, a good path and that. […] On the other hand it [the PCDP] has gone to this overstated, you know, the control and like this. I don't think that is the solution now. It's a matter of this contact and the human meeting. I cannot emphasise this enough, and why is that so hard to understand! […] The reports and the forms that we have don't really support building-up of this [PCDP] plan either. [...] And maybe it's all that work, that gets frustrating sometimes. When you know what a huge amount of work there is beyond, while it's maybe expected that the focus is only on those targets [in the PCDPs]. (Interview 5)

We interpreted that the counsellor's faith in 'the good whole […], a good path and that' were based on a thinking of a process-driven approach, where objects of focus should be jointly identified, and chosen by consensus. Namely, throughout the data, such objects were found. They were related to personal, social, and situational meaning, concerning issues that not seldom were committed to a problem-oriented nature, and associated to life outside VET:

> Counsellor: [T]hat is to put pairs of eyes on the students in need of help and guidance. It is so important to sit down and discuss with them, and through these meetings find solutions and a way out [of the problem]. And, to talk to other counsellors and colleagues I think, with the student as person in focus. Maybe this isn't always where you solve the problem, but the absolutely most import thing is to have the time to talk to others. (Interview 9)

Practitioners perceived the 'personal competence development plan' (PCDP) traded approaches of process-driven counselling with mechanical 'structures of

control,' individualising the person to a technologically constituted development. Desirable individual 'needs' (e.g., Brunila & Lundahl, 2020) were perceived as 'pushed to fit' the structures (of PCDP and QR) instead of constituting a holism by jointly found 'ways to go' meaning for the counselee. The structure was comprehended as a strict 'plan-to-proceed' as documented within 'reports and forms' set as instrument forming not only student's technical progress but measuring the achieved results of that model. Here, a construction of understanding was needed to emphasise the meaning of learning and to 'know where we are going' in relation to QRs, because the PCDP was perceived as including neither such meaning nor direction.

> Teacher: [T]o get it [tasks/units within QR] transferred to the students with language they can understand, so that they know where we are going… Because, if one is presenting the qualification requirements so< [silences]. […] We have put down what it looks like in our own profession, with 'a flowchart,' as we try to show […] and explain this QR kind of thinking. (Interview 6)

The QR fails in pointing at objects informing counselling and leaning processes. So, as to suggest objects informing these, the practitioners tried to commit the targets in the QR with individual and social meaning to make them understandable or reasonable. This creates a disparity; 'quality' related to efficiency-measures was considered as 'another reason' whilst quality of a 'genuine' individual path was related to objects of 'something else.' Something that, however, forms holistic learning in terms of a 'good whole' for the student. The practitioners did here to some extent defy the structure of measurement and (neoliberal) 'need' (Brunila & Lundahl, 2020) to meet their students' real need. To do so, they needed to confront a reality beyond the empirically observable one of CBT (affirming Bhaskar, 2008; Billett, 2014b; Schaffar, 2021; Wheelahan, 2009).

Measurement as management and quality of counselling

Actions directed towards measured outcomes emerge as central throughout the data. A teacher with counselling duties stated:

> [To VET] has been added a staff of people doing things we were used to take care of [psychosocial support, upbringing]. Now we've been left somewhere in between, without a duty in such a sense. More and more we're expected to just fill in papers and forms, PCDPs, and study administrative systems, everywhere. And you can get blamed for things like 'you haven't filled in'… [the forms that] 'you should have!' Well, how are we supposed to have time for that? Everyone expects everything to be documented here [points at the computer]. But how can one document everything about like 50 students' anxiety there!< Why can't we any longer just talk and agree upon things? […] It's when everything becomes so electronic. (Interview 12)

The practitioners reported being responsible for up to 200 students, including administration of their PCDPs. They also reported on a decade of decreased financial support of VET leading to those students documented with 'approximately' similar PCDPs were categorised as having 'similar needs' and therefore

placed in same groups. This idea of 'right-person-in-right-group' reminds of notions like 'social engineering' (see Hood & Peters, 2004), here with assessable educational outcomes (Schaffar, 2021) and documentation in the foreground. A counsellor said:

> I may think the saddest part with this job is that I feel like I'm the student secretary's extended arm. I feel like [that] because I've to work with full pace at the computer. And some days, I don't even meet any students! (Interview 2)

We asked practitioners expressing similar concerns what consumes their time. Commonly the answers were relating to administrative duties and data-production concerning formations of individualisation. And to 'do what is required' for the students so they get their competence credits in time. As the counsellor continued:

> That's sad! Because I think, through those meetings with them [students] is what they really need. And that makes me<. I cannot guide all of them as they would need. It'll be to always do the 'most urgent.' (Interview 2)

Within practitioners' expressions of 'good counselling' they try to see students for who they are, in the genuine meeting with them as human beings. But they also perceive there is too little time for such meetings, since the most pressing problems should always be solved by priority and, at the end, it was merely the latter that could be individually considered.

Counselling is to pay attention to documentation relating their work to considerations of what 'quality' is, as to show that they have done what is 'right' (which gain resonance in Ball, 2017, p. 57–62). However, some practitioners chose other ways. Here a VET teacher with counselling responsibilities compared what practical knowledge is, in comparison to what it is expected to be:

> I work according to my ideals, that's what I do. […] It's the same when I'm assisting childbirth at the hospital [as when confronting my students], first I meet the human and then I write down what I'm supposed to. […] This computing and digitalised world has taken over so much, which has been criticised, yet we're going there. […] Inside me there is so much knowledge concerning my students that I cannot get out anyhow [=write down]. (Interview 4)

Some of the practitioners were also, in quite similar terms, describing their choices of strictly deprioritising the data-production. Due to these expressions, it was mediated that such a focus is inadequate. As a counsellor said:

> I try to work near my students, physically indeed, but mentally too. So that the threshold to contact me if needed remains low. […] This results in that PCDP documentation becoming a growing backlog. Well, I do the planning thing with them [students], but the technical things, to get everything down on paper and to the systems. […] Usually I do not get that documentation done. (Interview 11)

The system emphasises 'milestones' or given actions to be done and documented at a certain time. These seems to blur an object-informed counselling process with

a technologically constructed 'correct' scheme of a desirable progress (Vehviläinen, 2014); a beforehand agreement on 'how to act right:'

> The expectations [of counselling] are pretty clear. I think they are! But not then [in practice], […] If you go according to all the IMS[2] process schematics and like the 'correct path' it doesn't work. What's so frustrating is one knowing that someone is spending enormous amounts of resources building up processes as tools of 'how to act' that doesn't help us anyway. When it's kind of a real need you don't get any help from those< [systems]. […] It's this whole as well as that every individual is so totally different. For some [students] it's their message that is crucial, and for someone else it's their absence [from school/work]. For some, much absence is quite the normal behaviour […] You cannot know that. If there's someone who's always been good on the spot and then suddenly fades, just that might be the deciding thing. […] There is nothing like the right way in general for everyone. […] If there's something that deviates from the [usual] pattern of behaviour, then you have to intervene. But when the pattern of behaviour for each individual is so unique. (Interview 11)

Sometimes the focus on documentation leads to failure in achieving the desired purpose the targets of measurement are meant to underscore. The practitioners emphasise that what 'should be done' takes much more to understand than what is described as 'right action' and 'the correct path' at a given moment in time and proceeding. When it is 'a real need,' a focus on the process and not on its outcomes was emphasised (confirming Vehviläinen & Löfström, 2016).

A commonly occurring expressions was that counselling is depending on a wholeness that only can be built on situational aspects, understanding of each other's perspectives and motives. That is perceived as framed by a great amount of uncertainty and mutual constant negotiations, which literally faded due to the focus on 'quality' as instrumental action and documentation. Throughout the data, the practitioners were not seldom through resignation mediating how their action cannot be considered as 'causal' or situationally 'fixed' although some situations might generally 'seem the same' they seldom are when taking a closer look.

> Actually, it is the technical expectations that I am frustrated over. Not that one has to plan [the PCDP] but that it doesn't function like that. It's expected like something can proceed just in a certain way, and then [in practice] it doesn't. (Interview 8)

Due to counselling concerning students' PCDPs, expectations of a technologically categorisable approach and an expected progress in a certain direction was prominent (see 'production driven' proceeding, Vehviläinen, 2014).

Discussion

The purpose of the article was to shed empirical light on how counsellor and teacher practitioners perceived opportunities and challenges in merging their pedagogical and fundamental conventions of their work with structures and

frameworks constituting their practice. We have analysed how the tension between the immeasurable and targets of measurement was contextualised in counselling and, how counsellors and teachers construe counselling.

Trustworthiness and limitations

To ensure trustworthiness of the research we altogether discussed interpretations and the analysis until a consensus concerning what could be derived from the data was reached. Due to the DBR process, results have been evaluated and revised through dialogue with the practitioners in the two organisations to seek resonance between observation, interpretation of data, and the interpreted context. The limited number of organisations might reflect local institutional cultures within the results. If the study would have been able to include multiple organisations, it could possibly have resulted in more variation or a more nuanced picture.

The aim of the DBR was to contribute to pragmatic development of counselling, concerning the formation and support of students' mandatory 'personal competence development plan' (PCDP). Due to the short time perspectives, we could not comprehensively respond to that expectation since the results suggest structural problems in the manner in which the VET project materialises and is governed. Further research should focus on whether the results – related to the limited scope of this study – merely report on concerns of local character and national reform consequences, or whether they also reflect global concerns.

Measures of quality and accountability within VET counselling

The results suggest (1) adherence to quality measures in VET exchanged processes of human interactions and agreements with assumptions of outcomes. The striving toward reaching the measures led to failure in achieving the purpose of what the targets are meant to underscore, portraying a disillusion of control. (2) Accountability addressed a critical point concerning responsibility and evoked professional ethical dilemmas for some of the counsellors. Certain categorised actions of counselling processes were made externally visible by documentation but depleted counselling as learning processes inwards. We discuss these main points below.

First, as the results show, processes of counselling have been predefined and staked out in manuals and forms in the organisations' administration systems[2] as to match the structures of PCDPs to the frames of QRs. Technical-managerialist ways of comprehending counselling appear to have accumulated demands of documentation and data production corroborating Stephen Ball's (2017) findings. The results indicate that data production as 'evidence' of quality shows a prominent distinction between applying education to the level of the individual and individualisation, where the latter at least increase the administrative burden (see

Onnismaa & Pasanen, 2020). The results show, that committed to individualisation, management of 'the correct' path stole time from what was considered as forming an individually applied 'good' path. Here, individualisation moved focus away from human meetings, content of learning, confrontation of socio-emotional needs, etc. Rather than a dynamic tool supporting ways in which learning and development were comprehended by the practitioners, the PCDP remained a 'code-based categorising institutional instrument' (Säljö, 2014, p. 235ff). To this point, which we also consider as the main result, a detrimental illusion of control was attached. That is, an illumination of the difference between the immeasurable human consciousness, on which object-informed counselling processes can be based, and the technic-managerial attempts to portray a proceeding that might outward look like such a process. The portrayed proceeding seems influenced by what has been argued as doctrines of socio-technical systems and ideas of production engineering within NPM (see Hood & Peters, 2004). The targets of measurement become the self-strengthening instrument previously 'made' meaningful for the individualised CBT to materialise. Thus, quality assurance has forced a focus on, and a direction toward, the measured outcome, and an information accomplishment of system, which fades out underlaying factors enabling the emergence of the desirable outcome (Schaffar, 2021)

Second, due to NPM, attempts to attribute motives of social and individual meaning (e.g. Billett, 2006; Billett & Pavlova, 2005) to objects that can inform the counselling process (Vehviläinen, 2014) have become corrupt in a sense. Our results show that to commit objects of social and individual meaning to 'paths' of qualification, human consciousness accentuated as crucial within the collaborative counselling processes. Conditions for human consciousness to emerge was paradoxically perceived as neglected, forsaken. However, it is reasonable to assume that every counsellor with pedagogically and professionally reflected aims makes assumptions based on their subjective understanding of their counselees' needs, and that a counsellor seeks to support process-driven counselling whenever situationally required, or their professional conviction concerning support of their counselees learning. Nevertheless, instead of supporting meaningful processes-driven learning, 'staying at the service of the counselees' learning' (Vehviläinen, 2014), the production-driven procedure risks turning counselling into a therapeutic gearwheel within a mechanism where students are coached or 'pushed' in desired directions. Meeting their 'created' needs here match requirements of the system rather than that situational awareness of practitioners' human consciousness could be used to shape institutional scenes the other way around. This loops back to the individualisation vs. applying to individual discussion (e.g., Onnismaa & Pasanen, 2020), but also poses new questions. These concern the critique of the 'transition-machinery' from VET to work (see Brunila & Lundahl, 2020). For instance, the multifaceted question about how the project

of 'meeting the needs of students and working life' (rhetoric by FMEC, 2017a, 2017b) may indeed materialise in the future.

To conclude, just as 'behaviourism denied human consciousness and situational accounts' (Billett, 2006) the trend of accountability forces distinctions comprehended as the 'technological model of professional action' (Biesta, 2010, pp. 32–37) where pedagogy and responsibility does not seem to be central. As to elaborate – in prior prescriptive reforms, practitioners, 'right or wrong,' have sought to work around such 'quality' models to such extent they perceived them as not meeting the 'real' students' needs (Billett, 2014b, p. 10ff). The results highlight such attempts, where the practitioners sought own solutions, although these solutions may lead them into trouble pointing at (managerially) irresponsible actions. And in so doing, the managerialist quality paradoxically loops back to the question about what responsibility is (see Biesta, 2010). The results suggest there is a disparity between students' needs met by acting in responsible ways and individualised needs responded to by terms of accountability. Here, some of the practitioners confront ethical dilemmas emerging between questions concerning public expectations of their work and prospects committed to their professional responsibility. Those questions concern the unclear focus and affordances of their practice; the future of VET and their workplace; the wellbeing of their students as humans; and the quality of educational outcomes seen as the culturally formed standard of the vocational professions dubiously gaining resonance in accountability. To be at the service of counselee's learning (Vehviläinen, 2014), 'good' paths were shown as central. Nevertheless, in settings where these paths became restricted to ever-more tightened frames of the production-mode (Hood, 1995), counselling within VET risks becoming a structure within accountability systems, where it might just simultaneously show evidence of quality outward and be depleted inwards.

Endnotes

[1] With VET we mean both basic level vocational institutes and adult education centres on upper secondary level, according to European and National Qualifications Framework.
[2] Information Management System (IMS), a platform for quality and management where work performance is based on data production, process mapping, manuals, metrics, and instructions.

Acknowledgements

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Å tilrettelegge for elevenes yrkesinteresser: En surveystudie av yrkesfaglærernes kompetanse i yrkesdifferensiert opplæring

A survey study of vocational teachers' competence for differentiated teaching adjusted to students' vocational interest

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Abstract

This article investigates vocational teachers' competence for differentiated teaching in the broad introductory courses that exist in vocational education and training (VET) in Norway. In these courses students can specialise in a chosen vocation according to their interest. The study compares perceptions of vocational teachers educated in two different vocational teacher education programmes at two different universities. The programmes included are a 3-year bachelor programme (180 ECTS) and a 1-year postgraduate programme in education (60 ECTS). Cross-sectional survey data were collected among vocational teacher graduates (n = 279). Tests of mean differences indicated that the bachelor sample reported being significantly better prepared than the postgraduate sample for differentiated teaching according to students' vocational interests. However, the same difference could not be found in teachers' report of how often they used differentiated learning activities in school. The discussion points to how differences and similarities between content and practice areas in teacher education can explain teachers' perceptions and whether both teacher programmes develop the competence needed to teach in the broad structure of Norwegian VET.

Keywords: vocational teacher education, vocational teachers, differentiated teaching, competence, survey study

Innledning

Hvert år starter om lag 40.000 elever på ti brede yrkesfaglige utdanningsprogram i videregående skole i Norge (Statistisk sentralbyrå, 2021). De brede utdanningsprogrammene utgjør det første året av opplæringen (Vg1) og leder til rundt 200 ulike yrker (NOU 2019:25). For eksempel leder utdanningsprogrammet Bygg- og anleggsteknikk til 23 ulike yrker, slik som tømrer, murer og rørlegger. Denne artikkelen utforsker yrkesfaglærernes kompetanse til å tilrettelegge opplæring for elever med ulike yrkesinteresser i brede utdanningsprogram på Vg1, også kalt yrkesdifferensiert opplæring (Sylte, 2017). Flere studier antyder at yrkesfaglærere synes målet for opplæringen er uklart i en bred struktur (Hiim, 2013; Olsen & Reegård, 2013; Tønder & Skinnarland, 2016). Yrkesfaglærere kan oppleve det som utfordrende å tolke mål, velge innhold og læringsaktiviteter og motivere elever med ulike yrkesinteresser og motivasjon for utdanningen de startet på (Hiim, 2013; Johansen, 2021; Olsen, 2013).

Utfordringene yrkesfaglærerne beskriver i brede utdanningsprogram kan gjenkjennes som et grunnleggende dilemma i fag- og yrkesopplæringen (Billett, 2009; Olsen, 2013). Dilemmaet handler om hvorvidt målet for yrkesopplæringen er at elevene utvikler en bred, generell basiskompetanse eller en større grad av fordypning og yrkesspesialisert kompetanse. Hvordan disse målene kombineres og balanseres er dermed ikke bare et dilemma for aktører i Norge. Internasjonalt finner vi store forskjeller i hvordan yrkeskompetanse blir utviklet, og forskjellene påvirker lærerens rolle (Billett, 2009). For eksempel kritiseres yrkesopplæringen i England og Australia for å være redusert til å handle om å utvikle jobbrelaterte ferdigheter på bekostning av dypere teoretisk forståelse og muligheter til å delta i samfunnsdebatten (Wheelahan, 2015). Ulike svingninger mellom bredde og spesialisering vises også i nylige reformer av yrkesopplæringen i Norden. I Sverige, som tradisjonelt har hatt en bred og skolebasert yrkesopplæring, ble større grad av yrkesspesifikk kompetanse vektlagt i reformen Gy11 (Panican & Paul, 2019). Blant annet er lengden på praksisopplæring i arbeidslivet utvidet, og det er opprettet en lærlingeutdanning parallelt med yrkesprogrammene i gymnasieskolen. I Danmark, der elevene har valgt spesialisering tidlig, har pendelen svingt mot større bredde i første året av yrkesopplæringen i reformen fra 2014 (Aarkrog, 2020). Inngangen til yrkesopplæringen går gjennom fire brede hovedområder (mot tidligere 12 fellesinnganger). Det er lagt opp til en gradvis spesialisering det første året for at elever som kommer rett fra grunnskolen skal få bedre tid til å ta gode utdanningsvalg (Aarkrog, 2020).

Hvis vi vender tilbake til den norske konteksten, ble brede utdanningsprogram innført i videregående opplæring i Reform 94, videreført i Kunnskapsløftet i 2006, og i stor grad beholdt på Vg1 i strukturendringen som ble iverksatt høsten 2020. Lærerutdannere har argumentert for at lærerrollen i brede utdanningsprogram krever en ny didaktikk, der yrkesfaglærerne har god kjennskap til yrkene i

utdanningsprogrammet og kan tilrettelegge opplæringen for at usikre elever kan prøve ut ulike yrker samtidig som sikre elever kan fordype seg i valgt yrke (Hiim, 2013; Spetalen, 2014). Tidligere forskning tyder på at hvis opplæringen differensieres etter elevenes yrkesinteresser, styrkes elevenes opplevelse av motivasjon, mening og deres faglige utvikling (Dahlback et al., 2011; Hiim, 2013). I lys av disse forskningsfunnene blir kompetanse i yrkesdifferensiert opplæring en viktig dimensjon ved yrkesfaglærernes kompetanse. I lærerutdanningen skal studentene utvikle denne kompetansen.

Målet for artikkelen er for det første å undersøke i hvilken grad lærerutdanningen utvikler yrkesfaglærernes kompetanse i å yrkesdifferensiere opplæringen. For det andre undersøker jeg hvordan denne kompetansen brukes i opplæringen på Vg1. Artikkelen bygger på surveydata der yrkesfaglæreres egne oppfatninger av disse spørsmålene kommer til uttrykk. To ulike lærerutdanninger for yrkesfag inngår i studien. Det er ettårig praktisk-pedagogisk utdanning for yrkesfaglærere (PPU-y) og treårig yrkesfaglærerutdanning (YFL).

Tidligere forskning indikerer at begge disse lærerutdanningene vektlegger å utvikle studentenes kompetanse i å differensiere opplæringen etter elevenes yrkesinteresser (Dahlback et al., 2018; Schaug & Herudsløkken, 2019). Samtidig viser evalueringen av Kunnskapsløftet at skoledelen av yrkesopplæringen ikke i stor nok grad møter elevenes behov for spesialisering og faglig fordypning (Meld. St. 20. (2012–2013)). Opplæringen i skolen er ulikt organisert og yrkesfaglærere tilrettelegger opplæringen i varierende grad til elevenes yrkesinteresser (Bruvik & Haaland, 2020; Dahlback et al., 2018; Aakernes, 2018). Disse funnene belyser ikke om denne variasjonen kan settes i sammenheng med hva yrkesfaglærerne tidligere har lært om yrkesdifferensiering i lærerutdanningen. Det mangler derfor studier som undersøker 1) i hvilken grad de to lærerutdanningene utvikler yrkesfaglærernes kompetanse for yrkesdifferensiert opplæring, 2) hvordan kompetansen brukes i yrkesfeltet og 3) hva som er sammenhengen mellom 1) og 2). Ut fra dette behovet er forskningsspørsmålene i studien: 1) Hvordan oppfatter yrkesfaglærere fra PPU-y og YFL at lærerutdanningen har forberedt dem på yrkesdifferensiert opplæring i brede utdanningsprogram, og hvilke forskjeller finnes mellom lærergruppene? 2) Hvordan rapporterer yrkesfaglærere fra PPU-y og YFL at denne kompetansen brukes på Vg1? 3) Hvilke variabler henger sammen med yrkesfaglærernes rapporterte bruk av yrkesdifferensiert opplæring på Vg1? Variablene som undersøkes i forskningsspørsmål 3 er avgrenset til yrkesfaglærernes oppfatning av å være forberedt på yrkesdifferensiert opplæring, lærerutdanning, kjønn, utdanningsprogram yrkesfaglærerne underviser ved i videregående skole, og to påstander om undervisningen i Vg1. Disse redegjøres det nærmere for under metodiske tilnærminger.

I fortsettelsen vil jeg først gå nærmere inn på fenomenet brede utdanningsprogram, før de to lærerutdanningene presenteres. I analytiske perspektiver beskri-

ves forståelsen av begrepet yrkesdifferensiert opplæring og hvordan sammenligning av utdanninger kan bidra til å få fram ny kunnskap om yrkesfaglærernes kompetanse. Deretter beskrives studiens metodiske tilnærminger og resultater. Til slutt drøftes resultatene, begrensninger og implikasjoner av studien.

Brede utdanningsprogram i videregående skole

Brede utdanningsprogram finnes i alle de nordiske landene og kan karakteriseres som en bred, i hovedsak skolebasert, introduksjon til flere yrker innenfor samme fagområde (Jørgensen & Tønder, 2018). Programmene kvalifiserer elevene for videre spesialisering. Omleggingen til brede utdanningsprogram har blitt begrunnet ut fra ulike hensyn. I både Sverige og Norge har kompetansebehov i arbeidslivet vært brukt som argumenter. Brede yrkesutdanninger skulle ligge foran arbeidslivets behov (Olsen, 2013; Panican & Paul, 2019) og elever med et bredt kunnskapsgrunnlag kunne lettere tilpasse seg endringer i arbeidsmarkedet i et livslangt perspektiv (Nyen & Tønder, 2014). Av andre hensyn har utdanningsmyndighetene lagt vekt på å utforme mer enhetlige tilbud i yrkesopplæringen (Olsen, 2013; Panican & Paul, 2019) med større likhet i tilbud uavhengig av bosted og økonomiske ressurser, og mer fleksibel planlegging og bemanning av skoletilbud lokalt (Olsen, 2013).

I den danske reformen fra 2014 inngår enklere struktur og bedre oversikt som et innsatsområde (Slottved et al., 2020). Høyt frafall blant danske elevene ble satt i sammenheng med at elevene tidlig måtte velge yrke (Aarkrog, 2020). Et vellykket grep i reformen er at elevene, i det som kalles Grundforløb 1, får bedre mulighet til prøve forskjellige fag og dermed ta mer kvalifiserte utdanningsvalg (Slottved et al., 2020). Også i Norge har mange elever behov for å lære mer om yrkesmulighetene i utdanningsprogrammet for å gjøre gode yrkesvalg (Deichman-Sørensen et al., 2012; Nyen & Tønder, 2012). Brede utdanningsprogram kan derfor introdusere elevene for yrkesmulighetene som finnes og bidra til å sikre rekruttering til et bredt utvalg av fag og yrker (Nyen & Tønder, 2014).

Forskning fra Norge viser at flere yrkesfaglærere møter elevenes behov for å lære om flere yrker ved å tilrettelegge undervisningen i modulbaserte innføringer i utvalgte yrker (Dahlback et al., 2018; Deichman-Sørensen et al., 2012; Olsen & Reegård, 2013). En organisering av opplæringen i langvarige obligatoriske yrkesmoduler, der alle elevene må gjennom de samme modulene (for eksempel tømring, mur, betong og rør i bygg- og anleggsteknikk), har møtt kritikk (Dahlback et al., 2011; Hiim, 2013). Kritikken begrunnes med at elever mister muligheter for tidlig spesialisering i valgt yrke og at opplæringen kan være demotiverende for elever med klare yrkesinteresser. En av læringsmetodene som er utviklet for å ivareta elever med ulike yrkesinteresser, kalles interessedifferensiering (Sund, 2005). Metoden handler om at elevene jobber med åpne oppgaver rundt et felles tema. For eksempel kan elevene utforske temaet hygiene ut fra hva som

er relevant kompetanse i slakter-, kokk- eller servitøryrket i utdanningsprogrammet Restaurant og matfag. Denne læringsmetoden oppleves imidlertid som utfordrende av studenter og yrkesfaglærere (Dahlback et al., 2018; Spetalen, 2014).

Faget yrkesfaglig fordypning (YFF) står sentralt for å realisere elevenes ønsker om å prøve ut ulike yrker (Nyen & Tønder, 2012). Utvikling av et godt samarbeidet mellom arbeidslivet og skolen, gode nettverk og kontakter med bedrifter i lokalmiljøet har vist seg å være viktig for å få til et godt samarbeid om elevenes arbeidslivspraksis, men også for utarbeidelse av realistiske arbeidsoppgaver, lån av utstyr og mulighet for observasjon og læring av teknikker og arbeidsprosesser (Dahlback et al., 2011; Hiim, 2015; Utvær & Saur, 2019; Aakernes, 2018).

Denne gjennomgangen har vist at det er gode grunner for at yrkesopplæringen er strukturert i brede utdanningsprogram. Samtidig pekes det på noen pedagogiske og didaktiske utfordringer og muligheter. I fortsettelsen vil jeg presentere lærerutdanningene for yrkesfag som inngår i studien.

Lærerutdanning for yrkesfag

De to lærerutdanningene for yrkesfaglærere som tilbys i Norge har flere likhetstrekk, men skiller seg også fra hverandre på noen områder. YFL ble opprettet i 2000 ut fra behov for "en radikal endring" i struktur og innhold i lærerutdanningen for yrkesfag (St.meld. nr. 48 (1996–1997)). Et av målene var å møte yrkesfaglærernes nye kompetansebehov i den brede strukturen i skoledelen av yrkesopplæringen, og et nytt fag, yrkesfaglig bredde, ble utviklet for dette formålet. Fagene i PPU-y er derimot ikke endret på mange år, og studiemodellen er lik lærerutdanning i andre land, der pedagogiske studier bygger på studentenes tidligere yrkesutdanning og arbeidslivserfaring (Grollmann, 2008).

I den internasjonale litteraturen om lærerutdanning for yrkesfag diskuteres spørsmål knyttet til bredden av fagområder i lærerutdanningen (Simmons & Walker, 2013; Smith, 2019). I England og Australia uttrykkes det bekymring for at kortvarige utdanninger på lavere nivå svekker kvaliteten på både lærerutdanningen og yrkesopplæringen (Simmons & Walker, 2013; Smith, 2019). I Tyskland, der yrkesfaglærere normalt utdannes på masternivå med stor bredde i fagkretsen, stilles det spørsmål ved kvaliteten på lærerutdanningen siden nær 60 prosent av yrkesfaglærere utdannes gjennom alternative, kortere utdanningsveier (Kuhlee, 2021). I Sverige ble både bredden i yrkesfaglærernes undervisningskompetanse snevret inn og utdanningen forkortet fra 3 til 1,5 års fulltidsstudier gjennom en reform i 2011 (Asghari & Berglund, 2020).

Tett knyttet til diskusjonen som lærerutdanningens innhold og lengde er en uro for lav rekruttering inn i yrket. Mange land rapporterer om lærermangel (OECD, 2021), og også YFL har hatt rekrutteringsutfordringer og uteksaminerer færre kandidater enn PPU-y (Rokkones et al., 2019). Rekrutteringsutfordringer kan ha forhindret YFL fra å ha blitt Norges hovedmodell for utdanning av yrkeslærere, slik det var ønsket i utredningen om norsk lærerutdanning fra 1996 (NOU

1996:22) og i stortingsmeldingen som behandlet utredningen (St.meld. nr. 48 (1996–1997)). Et rammeplanutvalg nedsatt i 2011 vurderte om de to utdanningene kunne samkjøres (Kunnskapsdepartementet, 2011). Dette ble ikke realisert, men læringsutbyttet ble harmonisert på tvers av utdanningene (Kunnskapsdepartementet, 2013a, 2013b). Utdanningene reguleres også av nasjonale retningslinjer (Universitets- og høgskolerådet, 2018a, 2018b). Oversikt over innholdet i YFL og PPU-y vises i tabell 1.

Tabell 1. Oversikt over innhold og uteksaminerte kandidater i PPU-y og YFL.

Praktisk-pedagogisk utdanning for yrkesfaglærere (PPU-y), 60 ECTS	3-årig yrkesfaglærerutdanning (YFL), 180 ECTS
Pedagogikk og yrkesdidaktikk, 60 ECTS Pedagogisk praksis	Pedagogikk og yrkesdidaktikk, 60 ECTS Pedagogisk praksis Yrkesfag, 120 ECTS, inkludert yrkesfaglig dybde og yrkesfaglig bredde Yrkesfaglig praksis
Uteksaminerer 500–600 kandidater årlig	Uteksaminerer 200 kandidater årlig

PPU-y bygger enten på toårig yrkesteoretisk utdanning eller 3-årig profesjonsutdanning. I tillegg kreves to års praksis i yrket for opptak. Utdanningen går over ett år på heltid eller to år på deltid, og inneholder pedagogikk, yrkesdidaktikk og praksis i skolen.

YFL tilbys i ulike studieretninger som korresponderer med utdanningsprogrammene i videregående skole. For YFL er opptakskravet bestått fagbrev, fire års yrkespraksis i fagområdet og generell studiekompetanse. Innholdet ligger på bachelornivå og består av 120 studiepoeng yrkesfag med yrkesfaglig praksis i arbeidslivet og 60 studiepoeng pedagogikk og yrkesdidaktikk med pedagogisk praksis i skolen. Det som skiller innholdet i YFL fra PPU-y er med andre ord yrkesfag og yrkesfaglig praksis. Yrkesfaget består av to fagområder, yrkesfaglig bredde og yrkesfaglig dybde, hver på 60 studiepoeng. Yrkesfaglig bredde skal gi innsikt i fellestrekk og særtrekk i yrkene i utdanningsprogrammet studentene underviser ved. Yrkesfaglig dybde videreutvikler studentenes yrkesfaglige kompetanse.

Særlig relevant for denne studien er at de nasjonale retningslinjene for både PPU-y og YFL angir at studentene skal lære å tilpasse opplæringen til elevenes interesser, behov og utdanningsplaner (Universitets- og høgskolerådet, 2018a, 2018b). Det betyr at selv om faget yrkesfaglig bredde ikke inngår i PPU-y, er det forventet at begge utdanningene utvikler studentenes kompetanse i å tilpasse opplæringen til elevenes yrkesinteresser. Hvorvidt YFL i større grad enn PPU-y utvikler denne kompetansen, er et åpent spørsmål, siden problemstillingen ikke har blitt undersøkt tidligere. Forskning har vist at studentene ved YFL etterlyser mer praktiske øvelser og eksempler i breddeundervisningen (Dahlback et al.,

2019). Videre kan yrkespraksis ha betydning for at YFL-studentene lærer om ulike yrker, noe studentene opplever bidrar til å gjøre undervisningen mer praksisnær og for å lettere veilede elever i yrkesvalg (Rokkones et al., 2018).

Analytiske perspektiver

Flere begreper er brukt i tidligere studier for å beskrive hvordan undervisningen tilpasses elevenes yrkesinteresser og utdanningsplaner, blant annet interessedifferensiering (Sund, 2005), fagkonsentrasjon og spissing (Deichman-Sørensen et al., 2012) og tidlig yrkesspesialisering (Dahlback et al., 2018). I denne studien har jeg valgt å bruke begrepet yrkesdifferensiering. Sylte (2017, s. 8) beskriver at yrkesdifferensiering handler om "didaktiske metoder for differensiering av opplæringen ved utdanningsprogram som leder til mange ulike yrker". Differensieringen skal gi rom for ulike elevers yrkesvalg, slik at målene for opplæringen konkretiseres i relasjon til aktuelle yrker. Slik jeg forstår begrepet rommer det også at usikre elever får informasjon om og muligheter til å prøve ut ulike yrker gjennom yrkesorienterende læringsaktiviteter.

For å operasjonalisere begrepet valgte jeg å ta utgangspunkt i Hiims modell for en yrkesrelevant yrkesutdanning (Hiim, 2013, 2015). Modellen legger vekt på at god kvalitet i brede utdanningsprogram oppnås gjennom å yrkesforankre opplæringen, slik at innholdet tar utgangspunkt i hvordan aktuelle yrker utøves i arbeidslivet. Videre må elevene få mulighet til å orientere seg mot ulike yrker og ta gode yrkesvalg, og lære gjennom realistiske oppgaver og arbeidslivspraksis i valgt yrke. For yrkesfaglærerne innebærer dette å ha innsikt i yrkene i utdanningsprogrammet, å veilede om yrkesvalg og differensiere opplæringen etter elevenes yrkesinteresser (Hiim, 2013, s. 350). I tillegg kreves det at yrkesfaglærere kan samarbeide godt med arbeidslivet om elevenes opplæring. Begrepet er operasjonalisert ut fra to kontekster: 1) hva yrkesfaglærerne opplever at de har blitt forberedt på i lærerutdanningen, og 2) hva yrkesfaglærerne rapporterer at de gjør i undervisningen på Vg1. Kontekstene korresponderer med forskningsspørsmål 1 og 2. De konkrete spørsmålene som benyttes i spørreskjemaet beskrives nærmere under metodiske tilnærminger.

Artikkelen undersøker yrkesfaglærernes kompetanse. Kompetansebegrepet tillegges mange ulike forståelser og definisjoner (Antera, 2021; Schaffar, 2019). Felles for forståelsen av begrepet relatert til yrkesfaglærere, er at det består av kunnskaper, ferdigheter og holdninger (Antera, 2021). Disse kan læres og utvikles. Koenen et al. (2015, s. 2) vektlegger at kunnskapene, ferdighetene og holdningene som inngår i kompetansebegrepet, danner en integrert helhet, og kan sees på som en evne eller et potensial ("capability") for handling. Kompetansen brukes til å løse oppgaver og mestre utfordringer i spesifikke kontekster og kommer til syne i handling. Kompetansebegrepet tillegges derfor både et kapasitets- og handlingsaspekt (Eraut, 1994). I denne studien er det yrkesfaglærernes egne

oppfatninger av hvordan lærerutdanningen har forberedt deres evne (kapasitet) til å løse oppgaver og mestre utfordringer knyttet til yrkesdifferensiering som måles. I tillegg måles yrkesfaglærernes oppfatninger av hvor ofte de bruker yrkesdifferensierte læringsaktiviteter på Vg1.

To lærerutdanninger sammenlignes i artikkelen. Heggen og Terum (2017) trekker fram at en komparativ tilnærming til profesjonsutdanninger kan få fram kunnskap om studenters erfaringer det kan være vanskelig å få ved å studere en utdanning for seg. Et vesentlig forhold i sammenlignende studier er å belyse hva som er likt og ulikt i konteksten til det en ønsker å studere. Ut fra særtrekk ved ulike typer utdanninger, kan det være gode grunner til å finne forskjeller. Zeichner (2006) kritiserer studier av ulike lærerutdanninger for å legge for ensidig vekt på ulike strukturelle kjennetegn ved utdanningene. Slike kjennetegn kan være nivå, lengde og institusjonell tilhørighet. Zeichner argumenterer for å inkludere karakteristika ved innholdet i utdanningene. Mausethagen og Smeby (2017) trekker fram både innhold og arenaer som sentrale i diskusjoner om profesjonskvalifisering. I artikkelens diskusjonsdel vil jeg trekke fram hvordan forskjeller og likheter mellom innhold og arenaer i de to lærerutdanningene som sammenlignes, kan forklare funnene knyttet til yrkesfaglærernes kompetanse og yrkesdifferensiert opplæring.

Metodisk tilnærming

Datainnsamling og utvalg

Datamaterialet til studien ble samlet inn i en elektronisk survey sendt til kandidater fra PPU-y og YFL ved OsloMet – Storbyuniversitetet og Norges teknisk-naturvitenskapelige universitet (NTNU) våren 2020. Disse to institusjonene ble inkludert fordi de er de eneste som over tid har uteksaminert kandidater fra begge lærerutdanningene. Et bredt utvalg av kandidater, uteksaminert i perioden 2014–2019, ble valgt for å få et godt sammenligningsgrunnlag. Ut fra tilsendte e-postlister fra institusjonenes studentdatabaser, ble til sammen 1881 kandidater (958 fra PPU-y og 923 fra YFL) invitert til å svare på undersøkelsen. Deltakelse var frivillig, og samtykke ble gitt i starten av undersøkelsen. 747 respondenter (42 %) besvarte spørreskjemaet, og 567 av disse hadde undervisningserfaring fra yrkesfaglige utdanninger i videregående skole. Siden artikkelens kontekst er brede utdanningsprogram på Vg1, er kun data fra yrkesfaglærere som oppga at de underviste på Vg1 inkludert. 279 respondenter oppga å ha undervisningsstilling på Vg1 skoleåret 2019/2020.

Siden det mangler statistikk over hvor kandidatene jobber etter endt utdanning, er det vanskelig å si noe sikkert om hvor godt utvalget representerer populasjonen av kandidater uteksaminert fra OsloMet og NTNU med jobb på Vg1. Det er derimot mulig si noe om kjevhet i utvalget ut fra tre kjente variabler i

e-postlistene (lærerutdanning, årstall uteksaminert og institusjonstilhørighet). En bortfallsanalyse viste en høyere andel respondenter fra YFL (n = 172, 62 %) sammenlignet med bruttoutvalget (49 %). 107 respondenter oppga å ha fullført PPU-y. Andelen fra NTNU og OsloMet var lik populasjonen (henholdsvis 20 % og 80 %), mens noen flere respondenter uteksaminert i 2018 og 2019 besvarte undersøkelsen enn andelen uteksaminert i 2014–2017.

I forkant av datainnsamlingen ble studiens behandling av personopplysninger godkjent av Norsk Senter for forskningsdata (NSD ref. nr. 285224). Det ble lagt vekt på at kombinasjonen av data ikke skulle identifisere respondentene. For øvrig kjenner ikke forfatteren kandidatene gjennom utdanningsrelaterte aktiviteter.

Instrumenter

For å belyse forskningsspørsmål 1 benyttes fem spørsmål fra et instrument som måler yrkesfaglærernes oppfatninger av hvordan lærerutdanningen har forberedt dem på læreryrket (Lyckander, 2021). Dette instrumentet er en videreutvikling av et eksisterende instrument for lærerutdanning (Darling-Hammond, 2006), validert i en norsk kontekst (Solhaug & Dahl, 2016), som i hovedsak måler pedagogiske og didaktiske dimensjoner ved lærernes kompetanse. Spørsmålene i instrumentet er tilpasset en yrkesfaglig kontekst ut fra læringsutbyttebeskrivelser i rammeplan, retningslinjer og tidligere forskning. For en nærmere gjennomgang av valideringen av hele instrumentet, henvises det til Lyckander (2021).

I tabell 2 vises fem spørsmål fra instrumentet som omhandler oppgaver i læreryrket relatert til yrkesdifferensiert opplæring. Ut fra operasjonalisering av begrepet (jf. analytiske perspektiver), omfattet spørsmålene utvikling av læringsmål og planlegging og gjennomføring av undervisning, begge basert på elevenes yrkesinteresser. Videre handlet spørsmålene om yrkesveiledning, yrkesforankring av undervisningen og samarbeid med arbeidslivet. Yrkesfaglærerne ble bedt om å svare på spørsmålene ut fra sin opplevelse av hvordan lærerutdanningen hadde forberedt dem på å jobbe som yrkesfaglærer. Det ble presisert at med lærerutdanning menes alle aktiviteter i studiet, slik som praksis, samlinger, selvstudier, med mer. Svarskalaen gikk fra 1–7, der 1 tilsvarte veldig dårlig forberedt og 7 tilsvarte veldig godt forberedt.

For å svare på forskningsspørsmål 2, ble ni spørsmål om yrkesfaglærernes bruk av yrkesdifferensierte læringsaktiviteter i Vg1 utviklet (se tabell 3), basert på litteratur fra tidligere forskning (Dahlback et al., 2011; Hiim, 2013, 2015). Tre spørsmål omhandler informasjon om yrker og er ment å dekke yrkesorienterende aktiviteter. Ett spørsmål viser til bruken av obligatoriske yrkesmoduler og står derfor i motsetning til en yrkesdifferensiert opplæring. De siste spørsmålene handler om hvordan yrkesfaglæreren tilpasser opplæringen til elevenes yrkesinteresser, gjennom utprøving av reelle arbeidsoppgaver, åpne oppgaver med et felles tema, samarbeid med andre aktører og organisering av opplæringen i grup-

per. Svaralternativene Aldri, En gang i halvåret eller sjeldnere, 2–4 ganger i halv-året, 1–3 ganger i måneden, en gang i uka eller oftere var en tilpasning av alter-nativer fra OECDs internasjonale studie av lærere (Utdanningsdirektoratet, 2019), og viser til hvor ofte yrkesfaglærerne bruker de oppgitte aktivitetene fra skolestart til ut februar måned.

Til slutt i spørreskjemaet var det inkludert to påstander om undervisningen ved Vg1 som antas å ha sammenheng med hvor ofte yrkesfaglærere tilrettelegger opplæringen til elevenes yrkesinteresser (Dahlback et al., 2011; Tønder & Skin-narland, 2016). Påstandene dreide seg om yrkeskartlegging brukes i undervis-ningen på Vg1 og om undervisningen på Vg1 tilpasses skolens egne løp i andre året av opplæringen (Vg2). Svarskalaen var Svært uenig, Uenig, Enig, Svært enig.

For å sikre god begrepsvaliditet i undersøkelsen ble alle spørsmålene utviklet og kvalitetssikret i samarbeid med erfarne lærerutdannere. Spørsmålene ble også pilottestet av lærerstudenter ved YFL og PPU-y (n = 200), og deretter ytterligere justert basert på svarene.

Analyse av data

For å besvare forskningsspørsmål 1 og 2 undersøkes forskjeller i gjennomsnitt mellom yrkeslærere fra PPU-y og YFL. En t-test undersøker statistisk signifikante forskjeller mellom gruppene. Signifikansnivået er satt til 0,05. En hierarkisk re-gresjonsanalyse benyttes for å svare på forskningsspørsmål 3. Denne regresjons-analysen beskriver sammenhengen mellom flere uavhengige variabler og en av-hengig variabel, der de uavhengige variablene legges inn i analysen i ulike trinn (Howitt & Cramer, 2017). Målet er å undersøke hvilke uavhengige variabler i da-tamaterialet som bidrar til å forklare variasjonen i den avhengige variabelen. I analysen er avhengig variabel en sumskåre med gjennomsnittet av de fem siste spørsmålene oppgitt i tabell 3. Variabelen kalles "Bruk av yrkesdifferensierte læ-ringsaktiviteter". En reliabilitetsanalyse ble gjennomført for å undersøke varia-belens indre sammenheng. Den viste at Cronbach's alpha så vidt var under an-befalt verdi på .70 (Cronbach's alpha = .68) (Howitt & Cramer, 2017). Siden va-riabelen er nyutviklet og har et relativt lite antall spørsmål som dekker en bred forståelse av yrkesdifferensierte læringsaktiviteter (ulike oppgaver, organisering og samarbeid), ble reliabilitetsmålet vurdert som akseptabelt for videre analyser (Lance et al., 2006; Taber, 2018).

Seks uavhengige variabler inngår i regresjonsanalysen, blant annet kjønn, læ-rerutdanning, oppfatninger av å være forberedt i lærerutdanningen og påstan-dene om undervisningen i Vg1. Spørsmålene om forberedelse i lærerutdan-ningen ble slått sammen til en sumskåre (med gjennomsnittsverdier) kalt "For-beredt i lærerutdanning". Denne viste god reliabilitet (Cronbach's alpha = .91). Det var også ønskelig å inkludere utdanningsprogrammet yrkesfaglærerne un-derviser ved i analysen. I likhet med Aamodt et al. (2016) valgte jeg å dele utdan-

ningsprogrammene i to grupper basert på hvilken utdanningstradisjon de tilhører. Den ene gruppen ble kalt teknologiske fag og besto av bygg- og anleggsteknikk, elektrofag og teknikk- og industriell produksjon. Utdanningsprogrammene i denne gruppen tilhører en fagarbeider- og lærlingetradisjon, som kjennetegnes av en tettere kobling mellom innholdet i skoledelen av utdanningen og yrkesfag i arbeidslivet. De gjenværende utdanningsprogrammene design og håndverk, helse- og oppvekstfag, naturbruk, restaurant og matfag og service og samferdsel utgjorde den andre gruppen. I følge Aamodt et al. (2016) har det tradisjonelt ikke vært en like klar kobling mellom utdanning og de fleste yrkene i disse utdanningsprogrammene.

Alle uavhengige variabler, samt kodingen av dikotome variabler, oppgis i tabell 4. Deskriptiv statistikk er inkludert i tabell 5. Interkorrelasjon mellom variablene i regresjonsanalysen ble undersøkt i en korrelasjonsanalyse for å utelukke høy interkorrelasjon mellom forklaringsvariabler (Howitt & Cramer, 2017). Korrelasjonsmatrisen viste ingen variabler med høy interkorrelasjon (se tabell 6). Alle statistiske analyser ble gjennomført i SPSS, versjon 27.

Resultater

Forberedelse i lærerutdanningen

Tabell 2 viser hvordan yrkesfaglærerne oppfatter at lærerutdanningen forberedte på yrkesdifferensiert opplæring. På en sju-delt skala varierer gjennomsnittsskårene fra 3,6–4,7 for PPU-y og fra 4,9–5,5 for YFL. Yrkesfaglærerne fra YFL har et høyere gjennomsnitt på alle spørsmålene, og forskjellene er statistisk signifikante. I den ene enden av skalaen skiller spørsmål 4, om å yrkesforankre opplæringen, seg ut og viser klart høyest gjennomsnitt for YFL. Også yrkesfaglærere fra PPU-y opplever at å yrkesforankre undervisningen er et av spørsmålene lærerutdanningen har forberedt dem best på. Lavest gjennomsnitt i begge gruppene finner vi på spørsmål 5, om å samarbeide med lokalt arbeidsliv. Svarene viser en betydelig differanse mellom lærergruppene. Stor differanse finnes også på spørsmål 3, om å veilede elevene til å velge et yrke. Mindre forskjeller mellom gruppene og et høyere gjennomsnitt vises på spørsmål 1 og 2. Samlet sett viser resultatene at yrkesfaglærerne opplever at lærerutdanningen har forberedt fra middels til relativt godt på sentrale oppgaver for en yrkesdifferensiert opplæring.

Tabell 2. Gjennomsnitt, standardavvik, t- og p-verdier på spørsmål om forberedelse i lærerutdanningen. Fordelt på lærere fra PPU-y- og YFL.

Hvor godt forberedte lærerutdanningen deg på å …	PPU-y (n=107)		YFL (n=172)		t	p
	Snitt	SD	Snitt	SD		
1. bruke elevers yrkesinteresser som utgangspunkt for planlegging og undervisning	4,7	1,48	5,2	1,43	2,61	0,01
2. utvikle læringsmål bygd på kompetansemål og elevenes yrkesinteresser	4,6	1,31	5,1	1,43	3,16	0,02
3. veilede elever til å velge et yrke	4,0	1,59	5,0	1,48	5,77	<0,001
4. yrkesforankre undervisningen	4,7	1,48	5,5	1,27	4,76	<0,001
5. samarbeide med lokalt arbeidsliv	3,6	1,66	4,9	1,59	6,71	<0,001

Bruk av yrkesdifferensierte læringsaktiviteter på Vg1

Resultatene for yrkesfaglærernes bruk av kompetansen på Vg1, slik den er målt gjennom ulike læringsaktiviteter, framgår av tabell 3.

Tabell 3. Gjennomsnitt, standardavvik, t- og p-verdier på spørsmål om bruk av yrkesdifferensierte læringsaktiviteter i Vg1.

Læringsaktiviteter	PPU-y (n=106–107)		YFL (n=171–172)		t	p
Hvor ofte har du…	Snitt	SD	Snitt	SD		
1. informert elevene om yrkene i utdanningsprogrammet	3,6	0,98	3,9	0,92	2,15	0,03
2. veiledet elevene om hvor de kan finne relevant informasjon om yrkene i utdanningsprogrammet	3,2	0,96	3,5	0,84	2,62	0,01
3. latt elevene selv søke etter informasjon om yrkene i utdanningsprogrammet	3,2	0,98	3,4	0,87	2,01	0,04
4. organisert opplæringen i obligatoriske yrkesmoduler der elevene får lik opplæring store deler av året	3,4	1,44	3,6	1,24	1,23	0,22
5. tilbudt elevene å prøve ut reelle arbeidsoppgaver i fag i utdanningsprogrammet ut fra elevenes yrkesinteresser	3,5	1,03	3,6	1,08	0,40	0,69
6. gitt oppgaver med et felles tema der elevene løser oppgaven forskjellig avhengig av yrket de har valgt/har interesse for	3,1	1,21	3,2	1,12	0,81	0,42
7. samarbeidet med andre skoler for å gjøre læringsaktiviteter relevant for elevenes yrkesinteresser, hvis faget ikke tilbys ved egen skole	1,6	0,98	1,7	0,87	1,05	0,29
8. samarbeidet med arbeidslivet for å tilby elevene opplæring i yrkesfaglig fordypning (YFF) etter deres yrkesinteresser	3,3	1,38	3,3	1,18	0,22	0,82
9. organisert opplæringen i grupper etter hvilke yrkesinteresser elevene har	2,8	1,37	3,1	1,34	1,41	0,16

Hvis vi ser bort fra spørsmål 7, viser svarene på en fem-delt skala et gjennomsnitt mellom 2,8–3,6 for PPU-y og 3,1–3,9 for YFL. Dette betyr at gjennomsnittet ligger nær eller mellom svaralternativene 2–4 ganger i halvåret (kodet 3) og 1–3 ganger i måneden (kodet 4). Aktiviteten yrkesfaglærerne i begge gruppene oppgir å bruke oftest, er å informere elevene om yrkene i utdanningsprogrammet. På disse spørsmålene (spørsmål 1–3) vises det statistisk signifikante forskjeller i gjennomsnittene. YFL-lærere skårer så vidt noe høyere enn PPU-y-lærere.

Videre viser tabell 3 at spørsmålene om læringsaktiviteter og elevenes yrkesinteresser (spørsmål 5–9) har minimale, og ingen signifikante forskjeller mellom lærergruppene. Å organisere opplæringen i obligatoriske yrkesmoduler og å tilby elevene å prøve ut reelle arbeidsoppgaver i fag ut fra deres yrkesinteresser, er aktiviteter yrkesfaglærerne oppgir å bruke relativt ofte. Oppgaver med et felles tema, samarbeid med arbeidslivet og organisering av opplæringen i grupper etter elevenes yrkesinteresser rapporterer yrkesfaglærerne å bruke noe mindre. Gjennomsnittet rundt verdien 3 tilsvarer svaralternativet 2–4 ganger i halvåret. Det viser at organisering i grupper og oppgaver med et felles tema brukes sjelden for å yrkesdifferensiere opplæringen. Spørsmål 7 om samarbeid med andre skoler skiller seg ut. Yrkesfaglærerne rapporterer svært lite av denne formen for samarbeid. Til slutt ser jeg at fire spørsmål (nr. 4, 6, 8 og 9) har et høyere standardavvik, særlig for PPU-y. Dette betyr at det er stor spredning i svarene og respondentenes svar avviker derfor i større grad fra gjennomsnittet.

Hvilke variabler henger sammen med yrkesfaglærernes bruk av yrkesdifferensiert opplæring på Vg1?

Resultatene fra den hierarkiske regresjonsanalysen, som belyser forskningsspørsmål 3, vises i tabell 4. Analysen ble kjørt i to trinn. I det første trinnet analyseres de tre variablene kjønn, utdanningsprogram og lærerutdanning. Disse tre variablene er relaterte, siden de tre utdanningsprogrammene som utgjør teknologiske fag, har et flertall av menn med utdanning fra YFL. Ved å legge inn disse variablene først, undersøkes hva hver enkelt variabel kan forklare, kontrollert for de andre variablene i analysen. I neste trinn inngikk oppfatning av å være forberedt i lærerutdanningen og påstandene om undervisningen på Vg1. Den stegvise prosessen er illustrert i trinn 1 og 2 i tabell 4.

Tabell 4. Hierarkisk regresjon med "Bruk av yrkesdifferensierte læringsaktiviteter" som avhengig variabel, forklart ved seks uavhengige variabler. Standardiserte regresjonskoeffisienter.

	Trinn 1		Trinn 2	
Uavhengige variabler	R^2	Beta	R^2	Beta
	.06**		.17**	
Kjønn		.05		.05
Utdanningsprogram		-.27**		-.21*
Lærerutdanning (PPU-y/YFL)		.16*		.06
Forberedt i lærerutdanning				.17**
Yrkeskartlegging				.25**
Tilpasning til Vg2-tilbud				-.11*

De dikotome variablene ble kodet slik: Kjønn: kvinner=0, menn=1, lærerutdanning: PPU-y=0, YFL=1, Utdanningsprogram: teknologiske fag=1, ikke-teknologiske fag (resten)=0, yrkeskartlegging: enig=1, uenig=0, tilpasser Vg1 til skolens Vg2-tilbud: enig=1, uenig=0. *p < .05 ** p < .01.

Trinn 1 i tabell 4 viser at kjønn, utdanningsprogram og type lærerutdanning forklarer seks prosent av variasjonen i yrkesfaglærernes oppgitte bruk av yrkesdifferensierte læringsaktiviteter. Kjønn har liten betydning, mens utdanningsprogram og lærerutdanning forklarer noe mer. Den negative ladningen for utdanningsprogram (beta = -.27) indikerer at respondenter fra de teknologiske fagene bruker læringsaktivitetene mindre enn yrkesfaglærere i de andre utdanningsprogrammene. Videre viser den positive ladningen for lærerutdanning (beta =.16), at YFL-lærere bruker læringsaktivitetene mer enn PPU-y-lærere. Det stemmer overens med resultatene fra t-testen i tabell 3. I trinn 2 av analysen kontrolleres det i tillegg for variabelen forberedt i lærerutdanning og påstandene om undervisningen på Vg1. Da framgår det at betydningen av type lærerutdanning reduseres og blir ikke signifikant (beta = .06). Resultatet betyr at det ikke er mulig å si noe sikkert om sammenhengen mellom bruk av yrkesdifferensierte læringsaktiviteter og yrkesfaglærernes lærerutdanning. Oppfatningen av å være forberedt i lærerutdanningen viser imidlertid en positiv og statistisk signifikant sammenheng (beta = .17). Dette indikerer at yrkesfaglærere som opplever at lærerutdanningen har forberedt godt på yrkesdifferensiert opplæring, også rapporterer om økt bruk. Den sterkeste sammenhengen vises i påstanden om yrkeskartlegging brukes for å yrkesdifferensiere undervisningen på Vg1 (beta = .25). Yrkesfaglærere som er enige i denne påstanden bruker i større grad yrkesdifferensierte læringsaktiviteter. Siste uavhengige variabel i modellen viser at yrkesfaglærere som er enige i at undervisningen på Vg1 tilpasses til skolens egne Vg2-tilbud, i mindre grad yrkesdifferensierer opplæringen. Til sammen forklarer de uavhengige variablene 17 prosent av variasjonen i yrkesfaglærernes bruk av yrkesdifferensierte læringsaktiviteter.

Tabell 5. Frekvensfordeling over variabler inkludert i regresjonsanalysen.

Variabel	Svaralternativ	Antall	Prosent
Kjønn	Kvinne	136	48,7
	Mann	142	50,9
	Totalt	278	99,6
Utdanningsprogram lærerne underviser ved	Teknologiske fag	143	45,1
	Bygg og anleggsteknikk	39	14
	Elektrofag	52	18,6
	Teknikk og industriell produksjon	52	18,6
	Ikke-teknologiske fag (resten)	174	54,8
	Design og håndverk	24	8,6
	Helse- og oppvekstfag	78	28
	Restaurant og matfag	28	10
	Service og samferdsel	29	10,4
	Annet (inkludert naturbruk)	15	5,4
Totalt alle utdanningsprogram		317	113,6
Lærerutdanning	PPU-y	107	38,3
	YFL	172	61,6
Enig eller uenig i at yrkeskartlegging brukes som et utgangspunkt for yrkesdifferensiering av undervisningen på Vg1	Uenig	114	40,9
	Enig	164	58,8
	Totalt	278	99,7
Enig eller uenig i at undervisningen i Vg1 tilpasses innholdet i skolens egen Vg2-tilbud	Uenig	78	28
	Enig	200	71,7
	Totalt	278	99,7

Tabell 6. Korrelasjoner mellom avhengig og uavhengige variabler inkludert i regresjonsanalysen.

		1	2	3	4	5	6	7
1.	Læringsaktiviteter tilpasset elevenes yrkesinteresser	1	-.10*	-.18**	.09	.24**	.32**	-.13*
2.	Kjønn		1	.73**	.27**	.07	-.05	.06
3.	Utdanningsprogram			1	.32**	.09	-.13*	-.02
4.	Lærerutdanning				1	.33**	.14**	-.01
5.	Forberedt i lærerutdanning					1	.22**	-.09
6.	Yrkeskartlegging						1	-.03
7.	Tilpasser Vg1 til Vg2-tilbud							1

De dikotome variablene ble kodet slik: Kjønn: kvinner=0, menn=1, lærerutdanning: PPU=0, YFL=1, utdanningsprogram: teknologiske fag=1, ikke-teknologiske fag (resten)=0, yrkeskartlegging: enig=1, uenig=0, tilpasser Vg1 til skolens Vg2-tilbud: enig=1, uenig=0).
*p<.05 **p<.01, n=275.

Diskusjon

I denne diskusjonsdelen vil jeg først drøfte resultater knyttet til sammenhengen mellom de to lærerutdanningene og utvikling av kompetanse i yrkesdifferensiert opplæring (forskningsspørsmål 1). Deretter drøfter jeg resultatene knyttet til hvordan yrkesdifferensierte læringsaktiviteter brukes på Vg1 (forskningsspørsmål 2) før jeg til slutt trekker fram to interessante resultater fra regresjonsanalysen (forskningsspørsmål 3).

Resultatene knyttet til det første forskningsspørsmålet viser at yrkesfaglærerne oppfatter at lærerutdanningen har forberedt dem fra middels til godt på å yrkesdifferensiere opplæringen. Resultatene kan tolkes slik at lærerutdanningene har lykkes relativt godt med å utvikle denne delen av yrkesfaglærernes kompetanse. Ut fra innholdet i utdanningene er funnet ikke overraskende, ettersom overordnede læringsutbyttebeskrivelser angir at kandidatene skal utvikle kompetanse i veilede elever til å ta gode utdanningsvalg, i å yrkesforankre og tilpasse opplæringen til elevenes behov, interesser og utdanningsplaner (Universitets- og høgskolerådet, 2018a, 2018b). Videre har flere forskningsprosjekter utforsket hvordan undervisningen kan gjøres mer yrkesrelevant og tilpasset elevenes yrkesinteresser (Dahlback et al., 2011; Hiim, 2013). Resultater fra disse prosjektene er videre innarbeidet i lærerutdanningen gjennom lærebøker og artikler (Hiim, 2013; Haaland & Nilsen, 2013).

Ser vi nærmere på enkeltspørsmålene i tabell 2, viser resultatene størst forskjeller mellom lærergruppene på spørsmålene om å veilede elever til å velge et yrke og samarbeide med lokalt arbeidsliv. Denne forskjellen, i favør av YFL, kan forklares ut fra særtrekk ved innhold og arenaer i denne utdanningen. Et argument for å opprette YFL, var at yrkesfaglærerne trengte mer kunnskap om yrkene som inngår i eget utdanningsprogram i den brede strukturen i yrkesopplæringen (St.meld. nr. 48 (1996–1997)). Denne kunnskapen utvikles i faget yrkesfaglig bredde, og utgjør en tredjedel av innholdet i YFL. Dette faget har også tilknyttet yrkespraksis, der kandidatene skal lære å bygge nettverk og samarbeide med yrkesutøvere i andre fagområder enn sitt eget (Universitets- og høgskolerådet, 2018a). Tidligere forskning tyder på at nettopp yrkespraksis er viktig for at studentene i YFL knytter kontakter og bygger nettverk i arbeidslivet (Rokkones et al., 2018). Dessuten indikerer den samme studien at innsikten studentene utvikler om ulike yrker fra yrkespraksis bidrar positivt i veiledning om yrkesvalg på Vg1.

Selv om PPU-y også har læringsutbyttebeskrivelser knyttet til bredden av yrker og samarbeid med arbeidslivet (Universitets- og høgskolerådet, 2018b), så kan fraværet av faget yrkesfaglig bredde og yrkespraksis forklare forskjeller mellom gruppene. PPU-y-lærernes lavere gjennomsnitt på spørsmålet om å samarbeide med lokalt arbeidsliv og veilede elever til å velge et yrke, bør utforskes videre. PPU-y ble designet før en bred struktur ble introdusert i Reform 94. Da handlet lærerrollen om å utvikle elevenes kompetanse innenfor yrkesfaglærerens

eget fagområde (Spetalen, 2014), og pedagogikk og yrkesdidaktikk var ansett som et nødvendig tillegg til yrkesfaglærerens yrkesutdanning og arbeidserfaring. Ut fra utdanningssystemets brede struktur i dag, kan det stilles spørsmål ved om innholdet i PPU-y ivaretar yrkesfaglærernes kompetansebehov godt nok i bredden. Tidligere forskning tyder på at mange elever er usikre på egne yrkesvalg og utprøving av aktuelle yrker i arbeidslivet kan bidra positivt til å avklare elevenes valg (Høst et al., 2013; Nyen & Tønder, 2012; Slottved et al., 2020). Dette bygger opp under at både kompetanse i å veilede elever i yrkesvalg og samarbeid med arbeidslivet utgjør viktige deler av yrkesfaglærernes kompetanse på Vg1. Funnene i studien indikerer at PPU-y ikke forbereder studentene godt nok på disse områdene. I denne sammenheng er det interessant at PPU-y ved OsloMet fra studieåret 2021/2022 har innført et nytt arbeidskrav om fire dagers hospitering i et valgt yrke (OsloMet, 2021). Gjennom denne endringen innføres en ny læringsarena i PPU-y, og endringen kan tolkes som et lite skritt i retning av større samkjøring mellom de to lærerutdanningene.

Det andre forskningsspørsmålet handlet om hvordan yrkesfaglærere rapporterer at de bruker kompetansen i Vg1. Resultatene viser at yrkesfaglærerne oppgir å bruke yrkesdifferensierte læringsaktiviteter i gjennomsnitt mellom 2–4 ganger i halvåret og 1–3 ganger i måneden. Burde bruken vært høyere for at elevene skal kunne avklare yrkesvalg eller spesialisere seg i et valgt yrke? Det er vanskelig å svare på, siden spørsmålene ikke har vært utforsket i en kvantitativ undersøkelse tidligere. Imidlertid har jeg i artikkelen vist at både undervisning i lærerutdanningene (Dahlback et al., 2018; Schaug & Herudsløkken, 2019), styringsdokumenter (Meld. St. 20. (2012–2013)) og tidligere forskning (Dahlback et al., 2011; Hiim, 2013; Aakernes, 2018) vektlegger betydningen av elevenes muligheter for tidlig spesialisering. Ut fra dette, kunne vi kanskje ha forventet at yrkesfaglærerne rapporterte en hyppigere bruk av yrkesdifferensierte lærings-aktiviteter.

Videre viser resultatene knyttet til forskningsspørsmål 2 at forskjellene mellom lærergruppene er små. Lærere utdannet ved YFL oppga å informere om ulike yrker noe oftere enn lærere utdannet ved PPU-y. For de andre læringsaktivitetene var det ingen nevneverdige forskjeller. Dette funnet var noe overraskende, i og med at YFL har et betydelig innslag av yrkesfaglig bredde i utdanningen. En grunn til det ikke vises større forskjeller mellom lærergruppene, kan være at yrkesfaglærere samarbeider generelt mer enn andre lærere og har mer undervisning i team (Aamodt et al., 2016). Denne forklaringen kan bety at hvis ikke hele teamet jobber med å differensiere opplæringen etter elevenes yrkesinteresser, kan det være vanskeligere å utnytte kompetansen nyutdannede yrkesfaglærere har utviklet i lærerutdanningen. Annen forskning støtter at kollegaenes kultur kan både hemme og fremme at yrkesfaglærernes nye kunnskaper dis-

kuteres og utprøves i organisasjonen (Duch & Andreasen, 2017). Også ledelsesstøtten nyutdannede yrkesfaglærere får, er viktig for at deres nye kompetanse skal komme til nytte på skolen (Danmarks Evalueringsinstitut, 2015).

Som omtalt i innledningen har bruken av obligatoriske yrkesmoduler vært sterkt kritisert (Dahlback et al., 2011; Hiim, 2015). Funnene i denne studien indikerer at yrkesfaglærerne fortsatt tilrettelegger opplæringen i obligatoriske yrkesmoduler. Yrkesfaglærerne rapporterer å bruke obligatoriske yrkesmoduler oftere enn yrkesdifferensierte aktiviteter. Dette kan henge sammen med at yrkesfaglærerne opplever det som utfordrende å lede opplæring mot andre yrker enn sitt eget (Dahlback et al., 2019; Spetalen, 2014). I tillegg kan forskning på praksisopplæringen i begge lærerutdanningene tyde på at studentene ikke får øvd godt nok på å yrkesdifferensiere opplæringen, blant annet siden opplæringen organiseres på mange ulike måter i skolen (Dahlback et al., 2018; Schaug & Herudsløkken, 2019).

Til slutt i diskusjonen vil jeg trekke fram to av variablene som viste seg å ha en signifikant sammenheng med yrkesdifferensiert opplæring i forskningsspørsmål 3. For det første viste regresjonsanalysen at hvis yrkesfaglærerne oppfatter at lærerutdanningen har forberedt godt på yrkesdifferenisert opplæring, så er det større sannsynlighet for at de oppgir å bruke yrkesdifferensierte læringsaktiviteter på Vg1. Dette er et positivt funn for lærerutdanningens kvalifiserende funksjon. Det kan videre tyde på at hvis begge lærerutdanningene legger godt til rette for å utvikle studentenes kompetanse i å samarbeide med lokalt arbeidsliv, yrkesforankre og differensiere undervisningen etter elevenes interesser, så kan sannsynligheten for at kompetansen brukes på Vg1, øke. For det andre kan funnene tyde på at det er forskjeller i yrkesfaglærernes bruk av yrkesdifferensiert opplæring mellom ulike utdanningsprogram. Resultatene indikerer at yrkesfaglærere i teknologiske fag sjeldnere enn lærere i andre utdanningsprogram yrkesdifferensierer opplæringen. De teknologiske fagene beskrives som tradisjonelle kjerneområder for yrkesfagene og kan sies å tilhøre en fagarbeider- og lærlingetradisjon (Aamodt et al., 2016). Tidligere forskning har vist at mange yrkesfaglærere i disse fagområdene vektlegger å utvikle en bred basiskompetanse gjennom praktiske oppgaver i yrkesmoduler på verkstedene, for å vekke elevenes interesse og skape motivasjon og mestring (Deichman-Sørensen et al., 2012; Olsen & Reegård, 2013). Det er imidlertid behov for mer forskning som kan belyse forskjeller mellom utdanningsprogrammer og yrkesdifferensiert opplæring.

Studiens begrensninger

Studiens styrke ligger i muligheten til å undersøke et stort antall yrkesfaglæreres oppfatninger av yrkesdifferensiert opplæring i et kvantitativt surveydesign. Samtidig har designet visse begrensninger. Jeg vil omtale operasjonalisering av begrep og bruken av selvrapporterte data. Begrepet yrkesdifferensiert opplæring

er forsøkt operasjonalisert i studiens surveyspørsmål ut fra tidligere forskning på yrkesfaglærernes undervisning (Hiim, 2013, 2015). Studien har således en eksplorativ karakter. Samtidig kan det hende at spørsmålene som er stilt, ikke godt nok får fram bredden i begrepet. Videre forskning som for eksempel utforsker begrepet med andre forskningsmetoder kan bidra til å avklare om survey-spørsmålene bør utvides i antall, nyanseres eller endres.

Hvordan respondentene forstår og tolker spørsmålene spiller inn på konklusjonene som kan trekkes fra studien. For eksempel kan spørsmålet om felles oppgaver som elevene løser forskjellig forstås som caseoppgaver. Slike oppgaver brukes i større grad i utdanningsprogram med en skoletradisjon, slik som Service og samferdsel eller Helse- og oppvekstfag (Olsen & Reegård, 2013). Likedan kan tidsperioden studien omfatter, fra skolestart til ut februar, ha påvirket svarene om samarbeid med arbeidslivet. Tidligere forskning viser at utdanningsprogrammene velger å organisere faget yrkesfaglig fordypning på ulike måter gjennom skoleåret, for eksempel ved ukentlig eller periodevis utplassering i slutten av skoleåret (Deichman-Sørensen et al., 2012; Nyen & Tønder, 2012; Utvær & Saur, 2019). Det kan ha betydning for yrkesfaglærernes svar i denne undersøkelsen.

Til slutt vil jeg nevne at selvrapporterte data om undervisningspraksis kan være vanskelige å svare på. Det er en viss fare for at yrkesfaglærerne svarer ut fra det de tror de gjør i undervisningen eller hva de anser som "riktige" svar, og ikke hva de faktisk gjør. Disse begrensingene tilsier at det er grunn til å tolke studiens funn med forsiktighet. Funnene gir likevel noen interessante indikasjoner på forskjeller og likheter mellom to ulike lærerutdanninger og yrkesfaglærernes kompetanse i yrkesdifferensiert opplæring. Disse vil det være nyttig å utforske videre i en mer utdypende, kvalitativ studie.

Konklusjon

Målet for denne studien var å utvikle ny kunnskap om hvordan to ulike lærerutdanninger utvikler yrkesfaglærernes kompetanse i yrkesdifferensiert opplæring og undersøke hvordan denne kompetansen brukes i yrkesfeltet på Vg1. Funnene tyder på at yrkesfaglærerne oppfatter at lærerutdanningene har dem forberedt fra middels til relativt godt på å yrkesdifferensiere opplæringen. Lærere utdannet ved YFL opplever å være bedre forberedt enn lærere utdannet ved PPU-y. Forskjellene i kompetanse mellom lærergruppene vises i svært liten grad i yrkesutøvelsen. Uavhengig av lærerutdanning, viser resultatene at yrkesfaglærere som oppfatter å være godt forberedt på yrkesdifferensiert opplæring, oftere oppgir å bruke slike læringsaktiviteter. Overordnet sett kan denne norske studien sees i sammenheng med nordiske og internasjonale diskusjoner om hvordan innhold og læringsaktiviteter i lærerutdanninger henger sammen med yrkesfaglærernes profesjonelle utvikling. Videre kan den helt konkret bidra til en diskusjon

om hvordan innhold og arenaer i de to lærerutdanningene for yrkesfag i Norge ivaretar kompetansebehovene for yrkesfaglærere som underviser i brede utdanningsprogram. Studien kan også bidra til å se på endringer over tid. For eksempel vil det være interessant å utforske om fagfornyelsens vekt på dybdelæring bidrar til at yrkesfaglærere legger større vekt på elvenes muligheter for å spesialisere seg i et valgt yrke på Vg1.

Om forfatteren

Rønnaug H. Lyckander tar en doktorgrad i utdanningsvitenskap for lærerutdanning ved OsloMet – Storbyuniversitetet, Institutt for yrkesfaglærerutdanning. Hennes forskningsinteresser handler om lærerutdanning for yrkesfaglærere og læreres kompetanse. I doktorgradsprosjektet utforsker hun kompetansen som utvikles for profesjonell praksis i to ulike lærerutdanninger for yrkesfaglærere.

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Entrepreneurship education practices in VET: The roles of the teacher and the local region

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Abstract

This study focuses on entrepreneurship in vocational education and training (VET). Generally, teachers' operations in entrepreneurship education (EE) have been researched widely from the perspective of teaching and working practices and pedagogy. However, there are only a few studies of EE from the VET teacher's perspective. As a practice-oriented school, EE in VET is supposed to benefit from the hands-on experience of teachers as well as from the tight relationships with local businesses. The study applies quantitative methodology (n=795) and analyses the versatility of EE practices in VET and the roles that the teacher and the region play in determining EE practices. The findings indicate interesting new results especially on how the regional context influences practices. The research raises important topics for discussion concerning the teacher's role in regional development.

Keywords: entrepreneurship education, vocational teacher, vocational education and training (VET), teaching practices, region

Introduction

This study focuses on entrepreneurship education (EE) in vocational education and training (VET). Entrepreneurship studies are considered important for students in vocational education, because a large share of the students is likely to conduct their professional careers as entrepreneurs and self-employed. However, as a competence, entrepreneurship has set challenges to vocational education, as the teachers in vocational education are largely oriented towards educating professional skills (Fejes et al., 2019; Unwin, 2008). Fejes et al. (2019) noted that while the developmental aims of EE may align with other pedagogies, EE differs in terms of teaching activities, such as starting a business. In this paper, we suggest that more scrutiny of those teaching activities through which EE is carried out in VET is needed.

So far, only few EE studies have been carried out on VET. Frank et al. (2005) studied the factors influencing entrepreneurial thinking and attitudes towards entrepreneurship in Austrian VET. They analysed the responses from 900 Austrian VET students and found that the education process can influence the students' entrepreneurial orientation and inclinations to start up business ventures. They conclude that teachers are likely to have a central role as their didactic style may either promote or hamper the students' development of independence and their ability to plan, cooperate and communicate. Besides the development of competences, Johansen and Schanke (2014) showed that EE also has direct impacts on VET students. They suggest that EE, implemented as practical, experiential learning, results in higher academic performance in lower secondary education (cf. Moberg, 2014). Johansen and Schanke (2014) conclude that to utilise this effect, more emphasis should be put on those entrepreneurship projects that are well connected with competence aims in teaching subjects and focused on stimulating personal qualities.

Some studies have taken a special focus on the VET teacher. For example, Birdthistle et al. (2007) applied a multi-stakeholder perspective for analysing the perceptions and attitudes towards EE at the secondary level in Ireland. They suggest that to promote EE programmes in VET, formal recognition, accreditation, teacher training and programme development are needed. Furthermore, they suggest that mainstreaming EE supports the students' self-employment, entrepreneurial behaviour and competency development. Winarno (2016) found in his research into Indonesian VET that teachers concentrate on teaching the theory of entrepreneurship, they have difficulties in their implementation, and they have minimal network connection to businesses. Further, neither new curriculum nor entrepreneurial strategy are enough to boost the entrepreneurial values of students. Winarno (2016) suggests that implementation of EE is dependent on the diversity of the entrepreneurial skills of the teacher. Johansen and Schanke (2013) made an inventory of EE in Norwegian VET. They focused especially on two

types of EE: company programmes and student enterprises. In their analysis, they showed that the emphasis on teachers pays off as the progress in offering EE programmes seems to be related with the offering of entrepreneurship training for the VET teachers.

While earlier research has recognised the impact of EE on the learning outcomes of VET students and the role of the teacher as guiding the learning process, the perspective on the actual EE teaching activities in VET has been rather limited. Yet, Fiet (2001a), Gibb (2005) and Solomon (2007) have suggested a wide range of teaching practices available and suitable for EE. From a pedagogical perspective, Fiet (2001b) and Ruskovaara and Pihkala (2015) suggest that teachers should adopt a wide variety of working practices for EE. In that sense, the development of EE would not be about finding the one best solution for implementing it in schools but increasing both the versatility of its practices and the teachers' abilities to apply the different practices effectively.

The delivery of versatile practices would benefit from the use of outside resources. Dodd and Hynes (2012) argue that the impact of regional context on EE should be considered carefully. They point out that regions differ in their entrepreneurship types, and that would have consequences on the EE carried out in the schools. Furthermore, in their study on VET teachers' networking activities, Ruskovaara et al. (2015) suggested that there is a multitude of resources available to support EE. The exploitation of these resources, however, is dependent on the teacher and their ability to operate with outside networks.

This paper progresses by discussing EE practices in VET and teachers' characteristics and their implementation of entrepreneurship in a certain area, in particular, noting the relevance of understanding the regional context. In this study, we argue that although the teacher's contribution to the practices used is clearly relevant, the impact of regional context upon EE should also be considered more closely. This study therefore aims to carry out a consideration of regional differences as a contextual influence upon used practices in EE in VET. This paper seeks to fill the gap by studying how regional context influences EE practices. Therefore, the research question is: How are VET teachers' background characteristics and regional context related to the versatility of EE?

EE tends to focus either on the traditional narrow perspective of entrepreneurship (Gibb, 2002), or the broader focus of EE (Axelsson, 2017). Under the narrow definition, Jones and Iredale (2008) place the primary emphasis of EE on learning how to start a company, plan a business venture and apply entrepreneurial skills and knowledge in a business context. The goal of EE, on the other hand, is to develop enterprising behaviour (showing initiative and resourcefulness) and skills that are also highly desirable outside the business environment. In this study, we apply the broad concept of EE as it has been adopted as the dominant

term in scientific literature and official guiding documents (European Commission, 2016; Ministry of Education, 2009; see also Fayolle & Gailly, 2008; Gibb, 2002; Haase & Lautenschläger, 2011; Onstenk, 2003).

This paper progresses by first discussing the pedagogy of EE, the teaching practices used, and the impact of teacher background factors on these. We highlight the impact of the surrounding business life and school operating environment on EE. Next, before explaining the findings, we explain the methodology by pointing out differences according to teachers' background characteristics and regional entrepreneurial differences presenting four hypotheses. In the discussion of our results, we will focus on how teachers' background and regional aspect affect the diversity of EE practices used by VET teachers.

Literature review and hypothesis formulating

In this section, a close examination is made of the relevant literature. The examination covers EE practices, EE-related teacher training, teachers' professional backgrounds and the role of region related to EE practices, and four hypotheses are constructed. Previous studies of regional cultural variations of entrepreneurship (Dodd & Hynes, 2012; Kotey, 2006; Walter & Dohse, 2012) have been used to construct a set of hypotheses to better understand which factors influence the diversity of practices used on EE. Figure 1 illustrates the relation between hypotheses and research question.
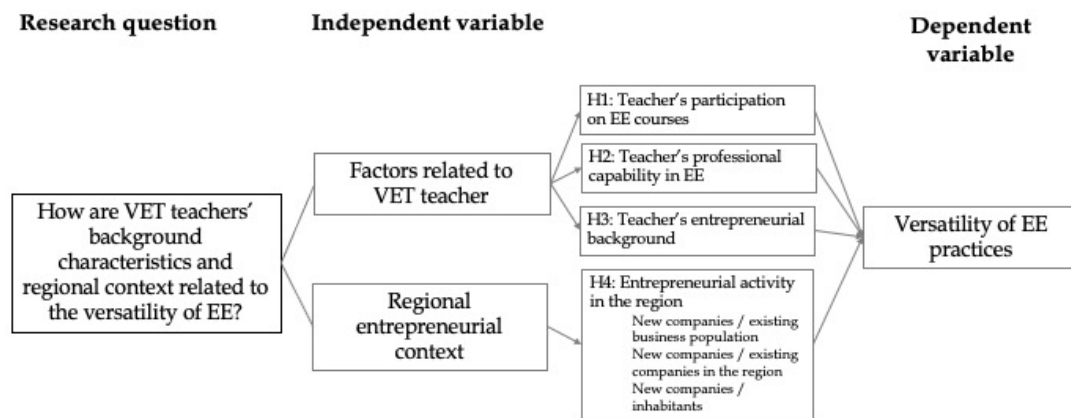

Figure 1. The relation between hypotheses and research question.

Pedagogy and EE practices

EE seeks to increase entrepreneurial awareness, thinking, and skills through pedagogical practices (Chen et al., 2015; Fayolle & Gailly, 2008; Fayolle et al., 2006). One of the central questions in a teacher's pedagogical decisions has been how to choose the appropriate teaching practice to achieve the needed entrepreneurial skills and objectives (Arasti et al., 2012; Arpiainen & Tynjälä, 2017; Ruskovaara & Pihkala, 2013).

In EE, visits to companies, entrepreneurs as school visitors and other kind of collaboration with external stakeholders are mentioned as suitable practices for EE. Further, the possibilities of using companies as authentic learning environments are also emphasised. (e.g., Cooper et al., 2004; Kickul et al., 2010; Solomon, 2007). Entrepreneurship is naturally connected to vocational education and is a part of VET curriculum in many countries, including Finland (Cedefop, n.d.). According to previous studies, teachers mainly teach EE in the classroom and use teacher-based practices (Bennett, 2006; Mwasalwiba, 2010). Further, EE is most effectively learned through active practices and in practical work (Arasti et al., 2012; Diegoli et al., 2018; Gibb, 2011; Nabi et al., 2017). Professional knowledge for an occupation, as needed in VET, requires learning knowledge, skills, and attitudes, which are best learned by combining different learning environments, including learning in companies and the workplace (Järvi, 2012; Ryökkynen et al., 2020; Virtanen et al., 2009). However, combining various actors and learning environments is not always easy and it takes time to break the conventional silos separating the school institution and entrepreneurs (Oksanen-Ylikoski & Ylikoski, 2015).

Studies have shown that different discussions concerning entrepreneurship are easily organised, low-threshold practices (e.g., Gibb, 2002; Neck & Greene, 2011; Pittaway & Cope, 2007; Shepherd, 2004; Solomon, 2007) and teachers seem to quite often utilise them (Ruskovaara & Pihkala, 2013, 2015). Business idea assignments, entrepreneurship related exercises and stories about entrepreneurs are suggested to be practical teaching materials (e.g., Blenker et al., 2011; Fayolle & Gailly, 2008; Fletcher, 2007; Gartner, 2008; Gibb, 2002; Neck & Greene, 2011; Shepherd, 2004; Solomon, 2007), whereas practice enterprise and mini company exercises provide students with a very concrete experience as an entrepreneur (Neck & Greene, 2011).

The teacher's professional capability in EE

According to Hytti and O'Gorman (2004), the teacher's competence is a decisive factor when developing EE initiatives. A person who has self-efficacy believes he/she is capable of performing a task. If a person feels capable of a task, he/she will act (Boyd & Vozikis, 1994), and the act is based upon self-assessment and ability (Kruger & Dunning, 1999). An earlier study states that the higher the

teacher's assessment of his/her EE capability is, the more the teacher uses networks in EE (Ruskovaara et al., 2015).

In this study, we assume that teacher training about EE, such as initial teacher training, in-service training, or courses, increases teachers' knowledge of EE, their self-efficacy and ability to deliver versatile EE. Studies have suggested that teachers' EE training has a positive effect on teachers' EE practices (Birdthistle et al., 2007; Frank, 2007) and those teachers who have participated in EE training utilise practices that are more demanding and time constraining more frequently (Ruskovaara & Pihkala, 2013, 2015). The effect of teacher training is, however, likely to be gradual rather than sudden. Lombaerts et al. (2009) stressed that teachers need time to embed new practices, and changes in school culture take time. According to Fiet (2001b), teachers need encouragement to adopt novel approaches and wider variety of working practices in their EE. Bennett (2006) noticed that teachers' approach to EE differs between those teachers who have received formal teacher training and have business experience, and with those who do not have that experience. A trained teacher is more inclined than others to develop students' personal attributes, has a broader approach to entrepreneurship teaching and uses modern interactive teaching practices (Bennett, 2006). Therefore, we propose:

- Hypothesis 1. VET teacher participation in EE courses has a positive effect on the versatility of their EE practices.
- Hypothesis 2. The stronger the VET teacher's perceptions of their capabilities are, the more versatile EE practices they provide.

Teacher's entrepreneurial background

According to Mårtensson et al. (2019), a VET teacher with a solid professional background and strong connections to local companies uses external stakeholders more readily when planning their teaching environment and practices. In addition, Hytti and O'Gorman (2004) suggest that the stronger the teacher's business background is, the more the teacher uses external resources and action-based learning practices in EE. Still, external experts or new learning environments are used quite rarely in EE (Ruskovaara & Pihkala, 2013, 2015; Ruskovaara et al., 2015), although companies as authentic learning environments are of paramount importance in entrepreneurial learning (e.g., Cooper et al., 2004; Järvi, 2012; Kickul et al., 2010; Solomon, 2007).

As a role model in entrepreneurship a teacher can boost EE by acting enthusiastically and using creative teaching practices (Hocenski et al., 2019), and stimulating or inspiring others in entrepreneurship (Bosma et al., 2012; Davidsson et al., 1995). Students point out that teachers can increase entrepreneurial intentions and improve several attitudes and competences of students if they have previ-

ously started a business. On the other hand, teachers believe that having the characteristics of an entrepreneur is enough to be considered a role model and increase entrepreneurial intentions (San-Martín et al., 2019). In their study of how entrepreneurs learn, Zozimo et al. (2017) found that role models in social contexts influence entrepreneurship as well learning in action (Järvi, 2012; Pittaway et al., 2009). We assume that a teacher with personal experience as an entrepreneur is likely to have better connections with other entrepreneurs and thus it is easier for them to approach entrepreneurs and utilise their expertise in teaching.

- Hypothesis 3. Teachers' entrepreneurial experience impacts positively on the versatility of EE practices.

Regional entrepreneurial context and teachers' EE practices

Education is very much like its socio-cultural environment, i.e. the socio-cultural environment influences education-(Dodd & Hynes, 2012; Kotey, 2006). Earlier research has shown that there is a strong relationship between education and entrepreneurship. Walter and Dohse (2012) state that the regional context has an effect on EE. Education and new firm formation have strong positive correlation (Davidsson et al., 1995) and prevailing socio-economic and political conditions have an effect on students' becoming entrepreneurs (Matlay, 2005). For VET, the regional presence of entrepreneurship is likely to play an important role in creating the platform for EE. According to a study of Ikävalko et al. (2009), the connection between EU and national guidelines for the activities of an individual teacher and the possible development of the region is weak.

Regional differences are significant in terms of the size and distances of the area, the number of inhabitants and companies, and the number of new businesses being created (Davidsson & Wiklund, 1997). Larger volumes of people and businesses create more opportunities, new businesses, and better possibilities for school-company cooperation. Already in 1986, Birley reported that the start-up rate is about 9–10% of the business population. In other words, business creates new business (Birley, 1986). This fact seems rather stable – in Finland the new business rate in a year is approximately 9–10% of the business population (European Commission, n.d.; Statistics Finland, 2018). However, this rate varies strongly on the regional level. From the perspective of inhabitants, the cultural differences between regions may cause different levels of entrepreneurial activity among the inhabitants. In their study on cultural effects on entrepreneurship in Sweden, Davidsson and Wiklund (1997) calculated the new firm formation rate for regions by counting the number of new company establishments per 1000 inhabitants and reported values between 5.7 and 14.8.

Carrying out EE, the VET teacher can decide the teaching practice, environment, and the use of external experts. We suggest that the more companies there are in the region, the easier it is for a teacher to collaborate with the companies

and use more versatile teaching practices. Implementing EE would be more effortless if there are companies in the vicinity of the educational institution and the teacher has good connections with the entrepreneurs in the area. Therefore, we propose:

- Hypothesis 4. The level of entrepreneurial activity in the region affects the versatility of EE practices positively.

Materials and methods

The context of the study

The study was carried out in Finland where entrepreneurship has been a part of vocational qualification requirement since 1995. In Finland, EE is an official part of Finnish VET education (Ministry of Education, 2009; Ministry of Education and Culture, 2017). In the national curriculum, EE appears as a cross-curricular theme, aiming to harmonise education and teaching. The goals of the theme are to help students to understand society at large from the perspective of different actors, develop the skills required for active citizenship, and to lay a foundation for entrepreneurial practices (Ministry of Education, 2009). Key competences of lifelong learning are part of the criteria, and the importance of entrepreneurship has been emphasised especially in the post-2015 period VET qualification requirements (Finnish National Agency for Education [EDUFI], 2019). Entrepreneurial competencies are included in the degree criteria either as cross-cutting competencies in all professional skills requirements of the degree components, as key competences for lifelong learning in common degree components, or as separate professional degree components (EDUFI, 2019; eRequirements, n.d.a, b).

Data collection and analysis

The Measurement Tool for Entrepreneurship Education (MTEE) was used for data gathering. MTEE is a constantly open online survey (www.lut.fi/mittaristo) and Finnish VET teachers have answered the survey voluntarily. Teachers were encouraged to respond, and the link was distributed through professional networks and different entrepreneurship promotors. The survey consists of approximately 140 questions, where teachers self-evaluate their teaching, its content and teaching practices used in EE, 14 of the questions are examined in this study (see Table 1).

The items in MTEE are based on earlier research on entrepreneurship and EE (see Table 1). In the development process of MTEE special care has been taken in this study to secure the overall quality of the study by formulating the questionnaire carefully, working together with a test group of teachers to improve the readability and clarity of the objects, and finally, tests and re-tests have ensured

the tool's reliability and validity (Ruskovaara et al., 2015). Common method bias needs to be taken into consideration when building on the self-reported data (Kamakura, 2010). To manage the effect of common method bias, we have included regional statistics as explanatory factors in the study.

Table 1. Items and their theoretical background (adopted from Ruskovaara & Pihkala, 2015).

Item	Source
Arranged a field trip to a business enterprise	Kickul, et al., 2010; Solomon, 2007
Discussed current financial news with learners	Gibb, 2002; Shepherd, 2004; Solomon, 2007
Discussed entrepreneurship related to hobbies	Gibb, 2002; Solomon, 2007
Discussed entrepreneurship related to the subject	Gibb, 2002; Neck & Greene, 2011; Solomon, 2007
Discussed the economic effects of different…	Gibb, 2002; Shepherd, 2004; Solomon, 2007
Enabled learners to create a practice enterprise…	Neck & Greene, 2011
Enabled learners to create marketing or other…	Cooper et al., 2004; Pittaway & Cope, 2007; Solomon, 2007
Guided learners to manage their own finances	Shepherd, 2004
Had learners complete a business idea assignment	Blenker et al., 2011; Gibb, 2002; Neck & Greene, 2011
Had students prepare entrepreneurship related calculation exercises, presentations, writings, …	Fayolle & Gailly, 2008; Shepherd, 2004; Solomon, 2007
Introduced local businesses in teaching	Henderson & Robertson, 2000; Pittaway & Cope, 2007; Pittaway & Hannon, 2008
Invited an entrepreneur to present his/her work…	Pittaway & Hannon, 2008; Shepherd, 2004; Solomon, 2007
Invited entrepreneurs or representatives of the business world to take part in instruction	Cooper et al., 2004; Pittaway & Cope, 2007; Solomon, 2007
Used stories about entrepreneurs as teaching…	Fletcher, 2007; Gartner, 2008; Shepherd, 2004

Variables

Dependent variable

EE practices consist of 14 variables (see Table 1), each describing a practice that has been identified to carry out EE. The respondents selected a numerical value for each object to best describe the frequency of the use of each EE practice in the preceding six months. To study the versatility of used EE practices, we built a new sum measure of the teachers' use of EE practices. The sum measure, EE Versatility, describes how many different EE practices each teacher has used. The measure ranges from 0 to 14.

Independent variables

VET teachers' characteristics are measured with four variables. Descriptive statistics for these variables can be found in Table 2. The VET teachers' characteristics include the following variables:

- Gender: A dichotomous indicator for the sex of the respondent. The indicator is coded in the data as male = 0, female = 1.
- Teacher training courses on EE: An indicator depicting EE teacher's own perception of training as the number of EE courses the teacher has taken on a scale of no courses = 0, some courses = 1, many courses = 2.
- Teachers' experience as an entrepreneur: A dichotomous indicator of whether the VET teacher has gained work experience as an entrepreneur or not. The variable is coded as no experience = 0, experience as entrepreneur = 1.
- Self-assessment of EE capability: The teacher's assessment of his or her EE capability on a scale from weak = 0 to excellent = 4.

Regional characteristics include three measures. Descriptive statistics for these variables can be found in Table 3.

- New companies/business population: A measure describing the local companies' ability to create new business. The measure has been created by dividing the number of new registered active businesses by the volume of registered active companies in the region in 2018. Information collected from Statistics Finland.
- New companies/existing companies in the region: A measure describing new business rate in the region. The measure has been created by dividing the number of new registered businesses by the number of existing businesses the region in 2018. Information collected from Statistics Finland.
- New companies/inhabitants: A measure describing the local inhabitants' entrepreneurial activity. The measure has been created by dividing the number of new registered active businesses by the number of inhabitants in the region in 2018. Information collected from Statistics Finland.

Respondents

In this study, the data consisted of 795 VET teachers' responses (see Table 2). In the data, 473 (59.5%) of the respondents are women. In the survey, the teachers reported the amount of teacher training on EE they have received and assessed their capability to teach it. The share of teachers who had no training in EE was comparatively high at 40.3%. From this point of view, it seems that the data is not strongly biased toward VET teachers that are positively aware of entrepreneurship. Overall, the respondent profile corresponds well with the general characteristics of Finnish VET teachers (EDUFI, 2019).

Table 2. The characteristics of the respondents.

Category	n	%
All	795	
Gender		
Male	322	40.5
Female	473	59.5
Number of EE courses the teacher has taken		
None	320	40.3
Some	384	48.3
Many	91	11.4
Worked as an entrepreneur		
No	472	59.4
Yes	323	40.6
Self-assessment of EE capability		
Weak	103	13.0
Moderate	263	33.1
Quite good	214	26.9
Good	162	20.4
Excellent	53	6.7

The respondents represent all Finnish regional areas, in total 18 regions. The regions' structural characteristics are depicted in Table 3 below. The table shows that the number of businesses per population (business density) is highest in Southern Ostrobothnia, while Kymenlaakso and Northern Ostrobothnia rate lowest. On the other hand, in terms of new business rate per company population, Southern Ostrobothnia scores lowest while Uusimaa and Pirkanmaa, the largest regions in Finland, score highest. Finally, in terms of regions' entrepreneurial activity, that is the number of new companies per 1000 inhabitants, Uusimaa keeps its position as the most entrepreneurial region in the country, while Kymenlaakso and Kainuu score lowest.

Analysis methods

We used the SPSS statistical program to perform the analysis. First, we did descriptive statistics to describe how often (mean) the teacher has used the practices in the past 6 months and how many of the teachers have used (frequency) which practice (Table 4). Next in the analysis (Table 5) we apply three distinct measures to identify the regional effect on the versatility of EE. We generated four models from which we ran linear regression analyses. Using this method, we found out which of the background variables determine the use of the variety of practices (Table 5).

Table 3. Entrepreneurial activity in the Finnish regions 2018.

Region	Inhabitants	Companies	New companies	Business density*	New bus rate**	Entrepren. activity***
Uusimaa	1,671,024	114,267	13,597	0.068	0.119	8.14
Pirkanmaa	515,095	34,724	3,186	0.067	0.092	6.19
Southwest	478,582	36,854	3,155	0.077	0.086	6.59
Northern Ostrob.	412,161	25,843	2,146	*0.063*	0.083	5.21
Central Finland	275,521	19,024	1,536	0.069	0.081	5.57
North Savo	245,602	17,416	1,208	0.071	0.069	4.92
Satakunta	218,624	16,580	1,149	0.076	0.069	5.26
Päijät-Häme	200,629	13,649	1,046	0.068	0.077	5.21
Southern Ostrob.	189,715	17,864	893	0.094	*0.050*	4.71
Ostrobothnia	180,794	14,142	893	0.078	0.063	4.94
Lapland	178,522	12,506	1,000	0.070	0.080	5.60
Kymenlaakso	173,388	10,960	703	*0.063*	0.064	*4.05*
Kanta-Häme	171,364	12,005	906	0.070	0.075	5.29
North Karelia	162,240	11,105	671	0.068	0.060	4.14
South Savo	144,615	12,723	677	0.088	*0.053*	4.68
South-Karelia	128,756	8,713	593	0.068	0.068	4.61
Kainuu	73,061	4,844	285	0.066	0.059	*3.90*
Central Ostrob.	68,437	5,384	310	0.079	0.058	4.53

*   The number of companies / the number of inhabitants.
**   The number of new companies / the number of companies.
*** The number of new companies / 1000 inhabitants.

Results

In this study, the focus is on understanding the factors explaining VET teachers' use of versatile EE practices. The basic descriptive statistics suggest that a wide range of practices are used to implement EE in VET (see Table 4). Introducing local businesses to students was the most frequently used practice; 753 (94.7%) individual VET teachers had used it 13.19 times (mean value) during the previous six months. The most-applied practices were discussions about an entrepreneurship-related subject (11.77), economic effects (11.41), and current financial news (10.53). Approximately 90% of the teachers had used these practices. Also, entrepreneurship-related calculations (10.18) and entrepreneur stories (9.02) were among the most common EE practices used by VET teachers, with approximately 80% of teachers using this practice. Practices where a teacher utilised external experts were not used so often. For example, a field trip to a business enterprise (5.63), having entrepreneurs or representatives of the business world take part in

instruction (4.73), enabling learners to create materials for a business (4.19), and inviting an entrepreneur to present her or his work at the school (2.84) were used more seldom and only half of the teachers had used it.

Table 4. Entrepreneurship education practices (n=795).

Object	M	SD	f	%
Introduced local businesses in my teaching	13.19	10.56	753	94.7
Discussed entrepreneurship related to the subject with learners	11.77	10.64	716	90.1
Discussed the economic effects of different actions with learners	11.41	10.34	718	90.3
Discussed current financial news with learners	10.53	10.17	707	88.9
Had students prepare entrepreneurship-related calculation exercises […]	10.18	10.84	630	79.2
Used stories about entrepreneurs as teaching material	9.02	10.09	664	83.5
Guided learners to manage their own finances	8.13	9.72	606	76.2
Discussed entrepreneurship related to hobbies	6.57	8.67	562	70.7
Had learners complete a business idea assignment	5.77	9.46	433	54.5
Arranged a field trip to a business enterprise	5.63	7.95	575	72.3
Invited entrepreneurs or representatives of the business world to take part […]	4.73	7.21	534	67.2
Enabled learners to create marketing or other material for a business	4.19	7.93	371	46.7
Enabled learners to create a practice enterprise or a business of their own	3.75	7.78	350	44.0
Invited an entrepreneur to present his/her work in the school	2.84	5.74	420	52.8

It is slightly surprising that in VET, which should be close to real working life and is supposed to use action-based learning practices (see e.g., Oksanen-Ylikoski & Ylikoski, 2015; Vainio et al., 2017), teachers mainly implement EE through classroom discussions. Further, it seems that entrepreneurs are invited to the school very rarely and visits outside of the school are also used quite seldom compared to discussions in a classroom. This might be a reference to the traditional silo effect as Oksanen-Ylikoski and Ylikoski (2015) state in their research. Previous studies have stated that EE is carried out mainly in the classroom (Ruskovaara & Pihkala, 2013, 2015). It seems that this finding also fits VET; that is, EE seems to be very teacher-centred and implemented within the school environment. The reason for a teacher-led classroom instruction can also be motivated e.g., by the time or financial resources given to the teacher.

In this paper we suggest that VET students' entrepreneurial learning would be supported by the versatility of EE practices. Using the EE Versatility measure, we conducted regression analyses on how the VET teacher and the local region

affect EE Versatility (see Table 5). In the analysis, the explanatory variables covered in Tables 2 and 3 were included in the model.

The results indicate that teachers' gender, participation in EE courses, and self-assessment of their ability to implement EE have explanatory value on the versatility of EE practices. In all the analysed models, training the VET teachers in EE seems to be the most effective way of promoting EE (see also Hahs-Vaughn & Yanowitz, 2009; Ruskovaara & Pihkala, 2015). The analysis shows consistently high and significant betas for the EE courses and capability for all the examples. The more training a VET teacher has got and the more capable they feel, the more versatile teaching practices the VET teacher uses. The first hypothesis suggested that enterprise-related teacher training positively affects the versatility of EE practices the VET teacher utilises. Participating in training seems to affect the diversity of the used practices. Therefore, the first hypothesis is strongly supported. In sum, the more EE training a teacher has participated in, the more they use different teaching practices.

Table 5. Regression analyses on the versatility of entrepreneurship education.

	Model 1	Model 2	Model 3	Model 4
Constant	7.242***	6.209***	8.712***	8.585***
Gender	0.649**	0.658**	0.665***	0.669***
EE courses	1.073***	1.066***	1.050***	1.046***
Entrepreneurial background	0.345	0.345	0.314	0.316
Self-efficacy	0.904***	0.903***	0.907***	0.907***
Business density		14.573		
New business rate			-0.239***	
Entrepreneurial activity				-15.296***
R^2	0.241***	0.242***	0.253***	0.253***

$**p < .01, ***p < .001$

The second hypothesis suggests that the stronger the VET teacher's perception of their own capabilities, the more versatile EE they provide. Our results indicate strong support for the second hypothesis. The data shows that teachers' choice of EE practices is dependent on how the teacher perceives their EE capability; the stronger the capability the more versatile EE practices the teacher utilises. This result is in line with earlier studies (e.g., Bennett, 2006; Birdthistle et al., 2007; Frank, 2007; Ruskovaara & Pihkala, 2013, 2015) and suggests that for the promotion of EE in VET, providing support and encouragement for teachers is likely to play a central role.

Somewhat surprisingly, the teacher's own entrepreneurial experience has no effect on the diversity of EE practices and our third hypothesis is refuted. The

result is contrary to previous studies (e.g., Mårtensson et al., 2019), which state that VET teacher's previous entrepreneurial experience makes it easier to utilise external experts in teaching. The result may be understood by the fact that EE is mainly carried out in classrooms and in these contexts the teacher's eventual entrepreneurial background is of little help and has little effect on the versatility of EE practices. Nevertheless, the fact that teachers' entrepreneurial experience would not have explanatory value on the versatility of EE, needs more careful consideration. In VET the teachers in general have a wide practical experience in the industry for the profession that they are teaching in VET. In the case of EE, this experience does not seem to add value.

The fourth hypothesis suggests that the level of entrepreneurial activity in the region affects the versatility of EE practices positively. In the analysis (Table 5) we apply three distinct measures to identify the regional effect on the versatility of EE. The analysis indicates very interesting results on the relationship between the region and EE. First, the business density measure does not reach a statistically significant beta. That is, the versatility of EE in VET seems independent of the number of companies in the region. This result is surprising as Dodd and Hynes (2012) have suggested that regional context offers capital to EE. In VET this does not seem to be important and could be understood as a result of the teacher-led EE practices (see also Ruskovaara & Pihkala, 2013, 2015). While teachers seem to mostly lean on class-room practices, the availability of businesses in the region plays no role in EE. From this point of view, the results do not lend support to our fourth hypothesis.

On the other hand, the new business rate and the entrepreneurial activity in the region reach statistically very significant loadings. Surprisingly, both measures show high negative betas. The new business rate, that is, the share of new businesses in the business population, seems to affect the versatility of EE negatively. That is, the lower the share of new businesses in the region, the higher the EE diversity. In line, the entrepreneurial activity of the inhabitants in the region also seems to affect the versatility of EE negatively. The results indicate that the less the inhabitants start new businesses the more diverse practices teachers use in EE.

Discussion

The present study set out to focus on the research question how VET teachers' background characteristics and regional context are related to the versatility of EE. The results of our study raise two important points for further consideration. First, based on the earlier research on the relationship between the region and EE (Davidsson et al., 1995; Dodd & Hynes, 2012; Walter & Dohse, 2012), we expected that the regions' entrepreneurial levels would have positive explanatory values for the versatility of EE in VET. E.g., Davidsson and Wiklund, (1997) stated that

entrepreneurship is a socio-cultural phenomenon and suggested that there would be a positive correlation between regional entrepreneurship and education. This would mean that EE would do better in the regions of high entrepreneurial rates. Our results seem contrary to earlier studies.

To understand this result we need to consider the VET teacher's special role in EE in a new way. If we regard the teacher as a mediator of regional entrepreneurship culture (Davidsson & Wiklund, 1997), the teachers would do less in less prosperous regions and would possibly wait for the circumstances to improve. The negative beta could be understood as the teacher instead taking an active role and striving to improve the situation in the region. In this way the teacher's EE activities could be understood as compensatory activities: as the region is doing badly in terms of entrepreneurship, teachers invest more in their teaching and thereby seek to promote entrepreneurship. We suggest that earlier research has approached the teacher's role in a too straightforward way. EE in VET does not take place in a vacuum but is affected by the context. However, the causal links between the different factors may work in unexpected ways. A number of new questions arise from this finding: what are the teacher's motivations driving the compensatory behaviour? Beliefs, attitudes, and self-efficacy, as well as motivation, affect a person's behaviour (Ajzen, 1991). That is, a teacher can be motivated because of the value of EE activity or because of external pressures, for example, VET requirements, legalisation, institutional policy, or regional reasons. Our findings support Winarno (2016), i.e., external factors cannot influence the development of students' entrepreneurial values, but ultimately, the key factor is the teacher and their competence. It seems that regional reasons or pressures do not function as direct motivators for teachers' EE practices. This may result from, for example, teacher autonomy, or characteristics specific of the curricula, or the institution. Further, it is possible that external circumstances affect the EE indirectly, e.g., through regional policy, VET resources, or availability of different fields of study. These indirect influences warrant for further studies. What is the role of the VET working community in supporting teachers' compensatory behaviour? How do teachers collect resources for their EE if the level of local entrepreneurial activities is low? We suggest that more research is needed to focus on this behavioural pattern as it is likely to have important implications for policy and practice.

Second, the analysis suggests that in VET, teacher-centred practices are still very much used although new EE practices have also been introduced in some vocational educational institutions (see Oksanen-Ylikoski & Ylikoski, 2015; Vainio et al., 2017). This fact is disappointing as entrepreneurship could be seen as a very practice-oriented competence that would flourish in the VET — a school aiming at providing students with practical vocational skills and competences. Normally, the teacher-centred emphasis would be answered with increased support and encouragement for VET teachers to cooperate with the local businesses

(Fiet, 2001b). Furthermore, these challenges could be dealt with the development of VET school culture (see Mårtensson et al., 2019) and could be addressed through professional teacher training (see also Lombaerts et al., 2009; Ruskovaara & Pihkala, 2015). However, our results also suggest that even if the teachers have entrepreneurial experience – and thereby access to cooperation with businesses – the experience does not seem to have any explanatory value for the versatility of EE. This result is puzzling. If the teacher-centred teaching approaches to EE are not a sign of the lack of EE training for teachers, or the lack of teachers' courage to approach local businesses, the reasons for using them grow from other sources. Entrepreneurship subjects in common and/or in professional optional units in VET are taught mainly by teachers who have graduated from a university with a Master of Business Administration degree. Unlike in professional compulsory and more hands-on units, subjects are mainly taught by persons with practical experience and specialists of the field who have a vocational and a polytechnic degree. Do the resources given to a teacher have an effect on teacher-centred teaching practices? Does the teacher's background training and their own learning experiences affect the used practices? Is it a question of the professional identity of a teacher which practice to use or something else? We suggest that this aspect warrants further studies.

This study has some obvious policy implications. First, our study confirms that the teachers have a decisive role in implementing EE in VET. However, the analysis provides new understanding of the factors affecting the teacher's provision of EE. As previously known, teacher training in EE is a strong contributor to advance EE. To promote EE in VET, a more systematic provision of EE studies in professional initial teacher training would make a powerful tool. Second, the profiling and curricula of VET in regions have largely followed the local circumstances and the needs of the local businesses. This relationship between VET and the region has been regarded as tight and elementary. For EE, this relationship seems to be more complicated. Policy makers would be wise to consider the role of VET in promoting entrepreneurship in the regions and notice that VET teachers are likely to react to the local development trajectories. In this sense, regional promotion of entrepreneurship seems to have more autonomous factors affecting the development of entrepreneurship than previously thought.

Limitations and further research

The study obviously has some limitations. The study was conducted in Finland and therefore the generalisability of the results internationally is unknown. However, the international research on EE is in general built of national studies and international theorising on the local results. In this sense, our study does not differ largely from the earlier ones. We believe that our results built on national findings would be of interest also to a wider international readership.

Despite the large research data, the method of quantitative research obviously has its limitations. When considering the validity aspects of research, it is always good to assess whether all respondents have understood the purpose of the questions and answered them reliably. Reliability could have been deepened by conducting a qualitative interview with a smaller sample. We encourage further research using qualitative research. In terms of research ethics, the MTEE was built especially from the perspective of securing the anonymity, security and possibilities for learning and development of the respondents. No ethical issues have emerged in the use of the data.

As a research topic, VET remains under-researched. For our study this has caused a need to use research findings also from EE research conducted at different educational levels. For this reason, the level of theorising may stay blurred and the accumulation of theoretical knowledge on EE in VET is slow. In general, more research is needed on EE in the VET context. As a further research topic, it would be worth re-examining previous research and looking at what they claim about the teachers' role in cooperating with local and regional partners.

Acknowledgements

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Flerkulturalitet i opplæring av helsefagarbeidere

Multiculturalism in the training of health care workers

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Abstract

This study will focus on multicultural competence as a topic in vocational training of health care workers in upper secondary school in Norway. The research question is: How do vocational teachers practice multiculturalism in health care worker vocational education? According to OECD, multiculturalism is one of the core competencies of the 21st century. The need of healthcare professionals with expertise in multicultural sensitivity and health-communication will increase in the years ahead because this competence is essential for a good and caring professional health care. The theoretical perspective is related to a theoretical conceptual understanding of multicultural competence and to vocational didactic perspectives on health care worker vocational training.

The data collection is based on semi-structured interviews with vocational teachers. The key findings show that multicultural issues are rarely highlighted in education and that multicultural topics are rarely linked to vocationally relevant professional tasks. Topics as health-communication and diet were poorly elucidated from a multicultural perspective. There will be a need to implement various occupationally relevant multicultural issues in health worker vocational training to prepared for the multicultural professional life.

Keywords: multiculturalism, health care worker education, vocational teachers, health communication, diet

Innledning

Denne artikkelen belyser hvordan flerkulturell kompetanse blir vektlagt av yr-kesfaglærere i utdanningsprogrammet helse- og oppvekstfag (HO) og program-området helsearbeiderfaget trinn 2 (vg2) på videregående skole i Norge. Flerkul-turell kompetanse vurderes som en nøkkelkompetanse i det 21. århundret (OECD, 2019; Teräs & Lasonen, 2013). Læreplanene i Kunnskapsløftet 2006 (LK06), som var styrende da denne studien ble gjennomført, har et tydelig fler-kulturelt perspektiv. Dette er videreført i den nye reformen, Fagfornyelsen (LK20), som ble innført for grunnskole og videregående skole høsten 2020. I vg1 helse- og oppvekstfag står det at "eit viktig føremål med opplæringa er at den skal medverke til fleirkulturell forståing på oppvekst-, helse- og sosialfeltet" (Ut-danningsdirektoratet [Udir], 2016, s. 2).

Vi vil i stadig større grad møte mennesker med ulik tro, verdier og livsstil, noe som øker behovet for kunnskap om et mangfoldig samfunn. I vårt flerkulturelle samfunn utfordres etablerte væremåter og praksis ved nye måter å tenke og agere på (Lasonen & Teräs, 2016). Evne til omstilling og endring er særlig pres-serende innenfor helse- og omsorgsyrker, spesielt for helsefagarbeidere som dag-lig står i direkte kontakt med pasienter eller klienter med annen land- og kultur-bakgrunn. Samfunnets behov for helsefagarbeidere vil i årene fremover øke, og den flerkulturelle kompetansen kan være selve forutsetningen for en god og om-sorgsfull yrkesutførelse (Hjemås et al., 2019).

Ifølge Koenen et al. (2015, s. 1) bør det være en sammenheng mellom utdan-ningene og arbeidslivets behov for kompetanse. De sier følgende: "The idea of competences was introduced in higher education because of the disconnection between what was taught in classes and what was needed in the labour market." Det kan være grunn til å reise spørsmål ved om det eventuelt kan være diskre-pans mellom yrkesopplæringens innhold i videregående skole og samfunnets be-hov for helsefagarbeidere med flerkulturell kompetanse.

Studier viser at helsepersonell, som leger og sykepleiere, mener at egne utdan-ningsinstitusjoner ikke har gitt dem den nødvendige kompetansen om flerkultu-rell forståelse (Alpers, 2017; Nielsen & Birkelund, 2009). Studier av helsearbei-derfagutdanningen som belyser opplæring i flerkulturelle temaer er begrenset. Derfor kan denne studien være et bidrag inn i denne tematikken.

Studiens design og forskningsspørsmål

Studien retter søkelyset mot opplæringens innhold og form sett fra yrkes-faglærernes perspektiv. Det betyr at flerkulturalitet eller flerkulturell kompet-anse ikke er interessant i seg selv, men at søkelyset blir rettet mot hvordan yrkes-faglærerne knytter flerkulturalitet i opplæringen til temaene kultursensitivitet og

flerkulturell helsekommunikasjon. Med dette som utgangspunkt har studien følgende problemstilling: *Hvordan praktiserer yrkesfaglærere flerkulturalitet i helsearbeiderfagutdanningen?*

Med analyse av aktuelle styringsdokumenter og intervju av yrkesfaglærere med undervisningserfaring fra programområdet helsearbeiderfagutdanning i utdanningsprogrammet helse- og oppvekstfag, vil jeg videre utforske lærernes flerkulturelle kompetanse. Tema som berøres vil blant annet være tidligere yrkespraksis og utdanning, og om dette eventuelt kan spille inn på hvordan de praktiserer flerkulturalitet i sin nåværende undervisning. Dette ledet meg til følgende forskningsspørsmål:

1. Hvordan vurderer yrkesfaglærere sin egen flerkulturelle kompetanse?

Temaer knyttet til flerkulturalitet er nedfelt i læreplanverket for Kunnskapsløftet 2006, som denne studien relaterer seg til. Jeg ønsket derfor å undersøke på hvilke måter lærere integrerte flerkulturelle problemstillinger i sin undervisning, noe som ga følgende forskningsspørsmål:

2. Hvordan implementerer yrkesfaglærere flerkulturalitet i opplæringen?

En av helsefagarbeiderens oppgaver er blant annet å gi omsorg og veiledning til pasienter med annen land- og kulturbakgrunn og møte mennesker i ulike livssituasjoner (Udir, 2018, 2020). Det er derfor av betydning at opplæringen i helsearbeiderfaget implementerer flerkulturalitet slik at helsefagarbeidere kan gi kulturtilpasset omsorg til pasienter.

Feltbeskrivelse: Samfunnets behov og læreplanens kompetansemål

Samfunnets behov for helsefagarbeidere

De fleste autoriserte helsefagarbeidere finner vi i kommunal sektor. Av totalt 55 000 årsverk i 2017, er 47 000 helsefagarbeidere, det vil si 83 prosent, i kommunal sektor (Hjemås et al., 2019, s. 48). Med økt andel av befolkningen med annen land- og kulturbakgrunn, samt økning av levealder, trenger vi flere helsefagarbeidere generelt og flere helsefagarbeidere med flerkulturell kompetanse spesielt (Blom, 2010; Kumar et al., 2010, s. 56; Telle, 2016). Dette står i kontrast til en svak nedgang i antall helsefagarbeidere som blir utdannet per år (Hjemås et al., 2019, s. 48). Ut fra Utdanningsdirektoratets statistikk ble det uteksaminert 3805 helsefagarbeidere i 2019 (Udir, 2019). Fremskrivningene av utdannede helsefagarbeidere mot 2035 viser et underskudd på 18 000 årsverk (Hjemås et al., 2019, s. 49).

Helsearbeiderfagutdanningen

Utdanningen som helsefagarbeider i videregående skole i Norge er bygd opp etter modellen to år i skole og to år i lære. Utdanningen starter med et bredt grunnleggende videregående trinn 1 (vg1), helse- og oppvekstfag, som leder til mer spesialiserte fagområder andre år, trinn 2 (vg2), hvor helsearbeiderfaget er ett av 11 programområder. Etter fullført to år i skole (vg1 og vg2) foregår tredje og fjerde år av opplæringen i bedrift (vg3), den såkalte læretiden. Etter endt utdanning (fire år) avlegges en praktisk/teoretisk fagprøve som grunnlag for autorisasjon og som gir yrkestittel helsefagarbeider. Helsefremmende arbeid, kommunikasjon og samhandling og yrkesutøvelse er tre programfag som er gjennomgående i hele utdanningsløpet. I tillegg til fellesfag som norsk, engelsk, matematikk og naturfag, har elevene et fag som heter yrkesfaglig fordypning (YFF). Formålet med YFF er å gi elevene mulighet til å oppleve realistiske arbeidssituasjoner på ulike læringsarenaer. Opplæringen kan foregå i skole eller i ulike bedrifter, hvor elevene får opplæring i yrkesoppgaver og ulike arbeidsmåter.

Læreplanens flerkulturelle perspektiv

I formålet for helsearbeiderfaget finner vi det flerkulturelle samfunnsperspektivet uttrykt slik: "Opplæringen i faget skal utvikle evne til å møte mennesker med ulik kulturell bakgrunn i ulike livssituasjoner og med ulik evne og mulighet for kommunikasjon" (Udir, 2018, s. 2). Opplæringen skal altså bidra til å utvikle elevens evne til flerkulturell forståelse i møte med mennesker med ulike verdier, holdninger og erfaringer. Dette indikerer at det flerkulturelle perspektivet må ivaretas i opplæringen. Helsefagarbeideren skal kunne gi råd og veiledning til hele befolkningen, uavhengig av pasientenes kulturelle bakgrunn.

Det er bare noen få kompetansemål som eksplisitt viser til flerkulturelle aspekter. I programfaget kommunikasjon og samhandling på vg1 i LK06 heter det at eleven skal kunne "grunngi og vurdere eigne haldningar og veremåtar når omsorg og utvikling hos brukaren er målet, uavhengig av kultur, religion, livsførsel og funksjonsnivå hos den andre" (Udir, 2006, s. 4), og på vg2 helsearbeiderfaget skal elevene vise "respekt og toleranse for andres kulturer og tradisjoner, livssyn […] for å fremme fysisk og psykisk helse" (Udir, 2018, s. 5). I programfaget yrkesutøvelse på vg1 skal elevene "gjere greie for utfordringar og moglegheiter som vårt fleirkulturelle samfunn representerer for yrkesutøvinga i oppvekst, helse- og sosialsektoren", og "gi døme på korleis brukaren kan stimulerast til læring og opplevingar, uavhengig av alder, kulturtilhøyring og funksjonsnivå" (Udir, 2006, s. 5). Vi ser altså et tydelig flerkulturelt perspektiv både i formålsformuleringen og i enkelte kompetansemål i programfagene. Formålet er førende for opplæringen generelt sett, noe som indikerer et flerkulturelt perspektiv også i de kompetansemål som ikke eksplisitt uttrykker flerkulturalitet.

Tidligere forskning på det helsefaglige flerkulturelle feltet

Studier som omhandler helsefagarbeidere og flerkulturell opplæring er begrenset i en nordisk kontekst. Forskning knyttet til videregående opplæring og flerkulturelle temaer handler gjennomgående om skolefrafall og valg av utdanningsprogrammer (Abrassart et al., 2020; Andersen et al., 2018; Arslan, 2019). Derimot finnes det noen studier om flerkulturalitet i profesjonsutdanninger innen sykepleie både i Norge og Danmark (Alpers, 2017; Alpers & Hanssen, 2014; Nielsen & Birkelund, 2009). Studien til Tuncel og Paker (2018) viser at helsefagstudenter fikk større forståelse for ulike flerkulturelle problemstillinger etter at de gjennomførte flerkulturelle kommunikasjonskurs.

En norsk studie av innvandrerkvinners erfaringer med helsepersonell viser at de i liten grad opplevde kultursensitive råd og veiledning om fysisk aktivitet og kosthold knyttet til sin sykdom (Bergsli & Hellne-Halvorsen, 2020). En annen norsk studie viser at 71 prosent av somaliske kvinner ikke forstår eller greier å anvende den helseinformasjonen som gis og som er avgjørende for gode helsevalg (Gele et al., 2016). Dette kan indikere at den kommuniserte helseinformasjonen ikke alltid blir forstått og fulgt, noe som kan påvirke pasientens helse. Det er rimelig å anta at helsefagarbeideren i sin yrkesutøvelse vil møte pasienter som trenger kultursensitive råd og informasjon. Kulturkompetent omsorg og veiledning kan være med på å redusere helseforskjeller i befolkningen, hevder Blanchet Garneau (2016). Flere studier viser at helsepersonell med kunnskap om klienters/pasienters historiske og sosiokulturelle bakgrunn gir bedre kultursensitiv omsorg (Serizawa, 2007; Tayab & Narushima, 2015).

Teoretisk forankring

Studiens teoretiske forankring knytter seg dels til teoretisk begrepsforståelse av flerkulturell kompetanse, dels til yrkesdidaktiske perspektiver på helsearbeiderfagopplæringen.

Flerkulturell kompetanse

Ifølge Horntvedt innebærer begrepet flerkulturalitet mennesker med ulik etnisk bakgrunn, inkludert den norske majoritetsbefolkningen (Horntvedt, 2015, s. 46). Flerkulturell eller flerkulturalitet er begreper som kan ha ulikt betydningsinnhold basert på hvilken fagtradisjon man slutter seg til, for eksempel innen sosialantropologi, sosiologi og psykologi (Dypedahl & Bøhn, 2017, s. 16; Eriksen, 2001, s. 9–21; Kasin, 2008, s. 55). Begrepene kan også oppleves omstridt fordi det kan forutsette klare grenser mellom kulturer, noe det ofte ikke er. I denne studien forankrer jeg forståelsen av begrepene til et helsefaglig perspektiv på kultursensitivitet og flerkulturell helsekommunikasjon. Dette perspektivet indikerer at

kunnskap for andres kulturelle preferanser og måter å kommunisere på er avgjørende for gode helsevalg.

Flerkulturell yrkeskompetanse

Koenen et al. (2015) hevder at kompetansebegrepet brukes veldig ulikt. Selv definerer de det som et integrert sett av kunnskaper, ferdigheter og holdninger, og sier at en kompetansebasert utdanning er en utdanning hvor kunnskaper, ferdigheter og holdninger er integrert og utvikles gjennom arbeid med autentiske yrkesoppgaver og yrkesutfordringer. Kunnskapsdepartementets definisjon av kompetanse er: "Kompetanse er evnen til å løse oppgaver og mestre komplekse utfordringer. Elevene viser kompetanse i konkrete situasjoner ved å bruke kunnskaper og ferdigheter til å løse oppgaver" (Meld. St. 28 (2015–2016), s. 28). Weigel et al. (2007) poengterer derimot at det å inneha kompetanse ikke bare handler om å anvende kunnskap i spesifikke kontekster, men at det også handler om å kunne noe om verdimønster, flerkulturelle spenninger og samfunnsforandringer. Personlighet, som Aakernes (2020, s. 11) tilfører i sitt kompetansebegrep, er viktig for helsefagarbeiderens yrkesutøvelse. Dette kan være vanskelig å måle og dokumentere, men ikke desto mindre viktig for en helsefagarbeiders yrkeskompetanse.

Kultursensitivitet

Kultursensitivitet handler om å være følsom overfor egne og andres kulturelle preferanser, altså det å vise forståelse og respekt for andres verdier og unikhet (Qureshi, 2009, s. 209) og kompetanse til å forstå kulturelle forskjeller (Papadopoulos et al., 1998; Tuncel & Paker, 2018, s. 198). Eller som Deardorff (2006, s. 247) sier: "Knowledge of others; knowledge of self; skills to interpret and relate; skills to discover and/or to interact; valuing others' values, beliefs, and behaviors; and relativizing one's self." Dette innebærer altså en gjensidighet i møte mellom mennesker (Ohldieck, 2018, s. 23) der påvirkningene skjer begge veier, i dette tilfellet både for helsefagarbeideren og for pasienten. Qureshi (2009) påpeker at det er viktig å kunne skille mellom hva som er kulturbetinget, allmennmenneskelig og individuelt i samhandling med pasientene. Det å bli mer bevisst på egen kulturelle bakgrunn, kjenne sin egen kulturelle identitet og dens påvirkning, er av betydning for å forstå andre kulturer og derved utvikle respekt og toleranse for andre (Papadopoulos et al., 1998).

Flerkulturell helsekommunikasjon

Health literacy (HL) har kommet inn i fagterminologien de senere årene. Jenum og Pettersen (2014, s. 272) definerer HL som "personlige, kognitive og sosiale ferdigheter som er avgjørende for enkeltindividets evne til å få tilgang til, forstå og anvende helseinformasjon for å fremme og ivareta god helse". Helsekommunikasjon handler altså om måter å kommunisere på som kan arte seg ulikt for ulike

kulturer. Det kan ofte vise seg at det kan være betydelig avstand mellom det helsepersonell antar at pasienter forstår og det pasientene faktisk forstår (Bellander & Karlsson, 2019; Jenum & Pettersen, 2014). Horntvedt (2015) sier at enhver kultur har tause regler og normer som former og styrer våre handlinger og måter å kommunisere på, noe som kan føre til usikkerhet og misforståelse for andre. Helsefagarbeiderens kunnskap og forståelse for ulike kommunikasjons- og væremåter kan gi grunnlag for at pasienter fra andre kulturer får en god og profesjonell omsorg. For med økende innvandrerbefolkning vil yrkesutøvelsen for kommende helsefagarbeidere forandre seg i takt med en stadig mer sammensatt pasientgruppe med ulike kulturelle koder, tankesett og kommunikasjonsstiler (Dypedahl & Bøhn, 2017; Nielsen & Birkelund, 2009). Nielsen og Birkelunds studie viser for eksempel at smerteuttrykk skapte vanskeligheter i kommunikasjon og interaksjon mellom pasient og helsepersonell. Opplæring og forståelse i forskjellige tankesett eller kommunikasjonsstiler kan være med på å hindre misforståelser i møte med pasienter (Dypedahl & Bøhn, 2017). Dette bringer studien videre til hvordan yrkesfaglæreren tilrettelegger den yrkesdidaktiske opplæringen i flerkulturalitet.

Yrkesdidaktisk helsefagopplæring

Yrkesdidaktikk handler om relevante undervisnings- og læringsprosesser i både skole og arbeidsliv med vekt på kobling av og sammenheng mellom yrkesteoretisk kunnskap og praksiserfaringer (Hiim & Hippe, 2001). Det yrkesdidaktiske perspektivet avgrenses her til yrkesretting, relatert til flerkulturell kompetanse i opplæringen av helsefagarbeidere.

Yrkesretting

Yrkesopplæringens mål er at elevene skal tilegne seg grunnleggende og relevant yrkeskompetanse for sin fremtidige yrkesutøvelse (Hiim & Hippe, 2001, s. 31). For at elevene skal være i stand til å møte endringer i arbeidsliv og samfunn (Meld. St. 28 (2015–2016), s. 6), forutsettes en yrkesrettet og relevant opplæring etter samfunnets behov for kompetanse (Johansen, 2020; Kunnskapsdepartementet, 2015; Sund et al., 2009). Yrkesretting av utdanning forutsetter en systematisk analyse og kritisk vurdering av sentrale yrkesfunksjoner og -oppgaver (Aakernes & Hiim, 2019). Kultursensitiv omsorg, pleie og kosthold er viktige aspekter i å yrkesforankre helsearbeiderfagutdanningen for å gjøre den relevant og samfunnsnyttig. Dette er i tråd med Koenen et al. (2015) sin beskrivelse av hovedprinsippene ved kompetansebasert yrkesopplæring. Innholdet i opplæringen bør fra deres perspektiv bygge på og være organisert om sentrale autentiske yrkesoppgaver, som i denne sammenheng handler om kultursensitivitet. Tidligere forskning har vist at undervisningen i yrkesfagområdene kan bære preg av den enkelte lærers tolking av læreplanene, deres interessefelt og det de kan mest om selv (Hiim, 2013; Hiim & Hippe, 2001, s. 26). Dette kan føre til avstand mellom

skolekontekstens innhold og det som møter elevene i arbeidslivet. I forskningen til Bødtker-Lund et al. (2017) uttaler lærerne at de har et behov for mer oppdatert yrkesfaglig kompetanse.

I YFF kan elevene ha anledning til å møte og kommunisere med virkelige pasienter med ulik kulturell bakgrunn. Yusof et al. (2017) hevder at man oppnår best kompetanse i kulturell helsekommunikasjon når man befinner seg i virkelige interaksjoner. Ved å bruke elevenes praksiserfaringer kan praksisnære og simulerte oppgaver bidra til å koble teori og praksis sammen. Et eksempel kan være måltidsrelaterte oppgaver knyttet til flerkulturelle mattradisjoner eller omsorgsoppgaver med vekt på ulike kommunikasjonsstiler. Her kan skole og bedrift ses på som to sammenhengende læringsarenaer (Gilje, 2017; Grimen, 2008; Smeby, 2013) der elevene får utviklet sin praktisk og teoretisk helhetlige yrkeskompetanse. Det vil være interessant å undersøke om lærere trekker helsearbeiderfagelevenes opplevelser og erfaringer med flerkulturalitet fra YFF inn i skolekonteksten og knytter teori til erfaringene de har ervervet seg.

Det kan være komplisert å lære og forstå kulturelle koder gjennom teoretisk kunnskap, i og med at det kan innebære at nyansene i de kulturelle kodene ikke kommer tydelig frem. Det kan dreie seg om å agere på en annen måte enn det den enkelte elev kjenner til når det gjelder for eksempel erfaringer knyttet til kjønn, kroppsvask og påkledning. Slike erfaringer kan stimulere eleven til refleksjon og ny kunnskap, noe som kan være med på å skape nye holdninger som inngår i helthetlig yrkeskompetanse. Dette kan være med på å utfordre eventuelle fastlåste eller endimensjonale kulturelle preferanser. Å rette oppmerksomheten mot erfaringsbaserte flerkulturelle problemstillinger i opplæringen vil kunne være med på å utvikle forståelsen av komplekse kulturelle holdninger og væremåter og dermed bidra til å utvikle den flerkulturelle kompetansen til elevene.

Metode

Kvalitative intervjuer

Formålet med denne studien er å få frem lærernes erfaringer med og implementering av flerkulturalitet i opplæring og hvordan denne opplæringen eventuelt gjennomføres.

Datagrunnlaget baserer seg på ti kvalitative semistrukturerte intervjuer med yrkesfaglærere på helse- og oppvekstfag hvor alle har erfaring med undervisning på helsearbeiderfagutdanningen. Intervjuene ble gjennomført på lærernes respektive skoler. Intervjuguiden ble forelagt informantene under selve intervjuet, og dreide seg om åpne spørsmål knyttet til lærernes vurderinger av egen flerkulturelle kompetanse, flerkulturelle tema som tas opp i helsearbeiderfagopplæringen og hvordan elevenes flerkulturelle praksiserfaringer integreres i

opplæringen. Intervjuene, som varte fra 60 til 90 minutter, ble tatt opp på lydfil og deretter transkribert (Postholm, 2010).

Informanter

Studien omfatter fire ulike videregående skoler – tre i Oslo og én i Akershus, nå Viken. Skolene må betraktes som storbyskoler preget av flerkulturelle elevgrupper, der tre av skolene hadde hovedvekt av elever med annen landbakgrunn, mens den fjerde hadde hovedvekt av elever med etnisk norsk bakgrunn. Informasjon om prosjektet ble sendt til avdelingsleder ved to skoler og direkte til lærere ved de to andre skolene.

Informantene i studien fordeler seg på ni kvinnelige og én mannlig lærer. Fem av informantene var utdannet yrkesfaglærere og fem var utdannet faglærere i ernæring, helse og miljøfag, en utdanning som ble endret til yrkesfaglærerutdanning i helse- og oppvekstfag i år 2000. Alle omtalte seg selv om yrkesfaglærere. I tabell 1 er begge yrkestitler brukt. Fem av informantene hadde helsefagarbeiderbakgrunn og fem hadde en annen landbakgrunn enn norsk og omtalte seg selv som innvandrere.

Tabell 1. Oversikt over informanter, utdanningsbakgrunn, antall år som lærer og kjønn.

	Tittel/utdanningsbakgrunn	Antall år som yrkesfaglærer	Kjønn
Informant 1 (i1)	Yrkesfaglærer	1	K
Informant 2 (i2)	Yrkesfaglærer	2	M
Informant 3 (i3)	Faglærer	Ca. 30	K
Informant 4 (i4)	Faglærer	Ca. 12	K
Informant 5 (i5)	Faglærer	Ca. 20	K
Informant 6 (i6)	Yrkesfaglærer	5	K
Informant 7 (i7)	Yrkesfaglærer	1	K
Informant 8 (i8)	Faglærer	Ca. 35	K
Informant 9 (i9)	Yrkesfaglærer	6	K
Informant 10 (i10)	Faglærer	17	K

Forskerrolle og etiske betraktninger

Som tidligere faglærer i ernæring, helse og miljøfag med undervisningserfaring fra helse- og oppvekstfag, er jeg både en insider og en outsider i feltet (Kvernbekk, 2005). Som forsker er jeg en outsider med mitt utenfrablikk, men samtidig en insider som tidligere faglærer og med kjennskap til opplæringen. Derfor har det vært viktig for meg å være bevisst at det som ikke er i overensstemmelse med egne erfaringer ikke blir oversett, tolket eller fylt ut slik at det passer med egen historie (Thagaard, 2018). Kvale hevder at forkunnskaper og

erfaringer om forskningstemaet nettopp gir grunnlag og forutsetning for gyldige tolkninger (Kvale, 1997).

Relasjonen mellom meg som forsker og lærerne jeg forsker på vil i utgangspunktet være preget av et asymmetrisk maktforhold (Kvale & Brinkmann, 2015). Kritisk blikk på mine egne verdier, holdninger, førforståelser eller interesser ble viktig for at informantenes stemme skulle bli hørt. Dette ble gjort med kontinuerlig kontroll av informasjonen, hvor lærerne gjentok eller bekreftet det som ble sagt.

Alle lærerne i studien ble informert om at det var frivillig å delta og at de kunne trekke seg fra studien når som helst. Samtidig ble alle lærerne anonymisert. Studien er lagt frem for Norsk senter for forskningsdata (NSD) med prosjektnr. 37670.

Validitet

Denne forskningen har altså en begrenset ekstern validitet fordi den har et begrenset antall informanter og antall skoler. Men ifølge Postholm (2010, s. 164) er "validitet i kvalitativ analyse mer avhengig av mangfoldet i informasjonen og forskerens evne til å analysere enn utvalgets størrelse". Selv om studien har få informanter, har lærerne ulike undervisningserfaringer og ulik yrkesbakgrunn, noe som kan indikere rikholdig informasjon.

Analyse og presentasjon av dataene

De semistrukturerte intervjuene ble transkribert, og dette ga grunnlag for kategorisering og koding som ble satt opp i meningsbærende enheter. Her ble relevante fellestrekk i materialet brukt som utgangpunkt for abstraksjon og sammenfatning i tråd med Malteruds firetrinns analysemodell (2017). Jeg har forholdt meg til systematisk tekstkondensering som metode for analysen av datamaterialet. Første trinn i prosessen var å lese gjennom de transkriberte intervjuene nøye for å få et helhetsinntrykk av lærernes fortellinger om flerkulturelle erfaringer i sine møter med pasienter og hvordan de brukte flerkulturell tematikk i undervisningen. Deretter ble dataene tematisert i meningsmønstre og likheter som grunnlag for kodifisering, som til slutt resulterte i en sammenfatning av tre kategorier med beskrivende sitater. Følgende kategorier utkrystalliserte seg: lærernes vurdering av egen flerkulturelle kompetanse, lærernes bruk av elevenes flerkulturelle praksiserfaringer og yrkesretting med vekt på flerkulturelt kosthold, flerkulturell helsekommunikasjon og kultursensitivitet.

Resultater

Lærernes vurdering av egen flerkulturelle kompetanse

I intervjuene med lærerne ønsket jeg å få innsikt i hvordan lærerne vurderte sin egen flerkulturelle kompetanse basert på deres tidligere yrkeserfaringer som helsefagarbeidere og fra deres tidligere utdanning. Ingen av lærerne kunne med sikkerhet huske at flerkulturalitet var blitt tematisert i yrkesfaglærerutdanningen eller faglærerutdanningen, noe som er forståelig siden det er komplisert å huske tilbake til tema som gjennomgås i løpet av et studium og er tilbakelagt i et tidsperspektiv. Men en av lærerne sier følgende: "Mulig vi hadde noe om dette i yrkesfaglærerutdanningen, men jeg husker egentlig ikke" (i2). En annen sa at "jo, jeg mener vi hadde et arbeidskrav knyttet til noe med kultur, men det er ikke noe som har festet seg i minnet" (i1).

Derimot fortalte flere om erfaringer med flerkulturelle problemstillinger fra sin egen yrkesutøvelse som helsefagarbeidere. Som yrkesutøvere skulle de håndtere utfordringer de ikke hadde kunnskap eller kompetanse om – "føltes ikke greit", sa en av informantene (i1). En lærer mente hun var heldig som etter hvert fikk delta på kurs der de tok opp ulike kulturelle væremåter, for eksempel uttrykk for glede og smerte. Hun sier følgende: "Ja, der jeg jobbet før, så hadde vi litt kursing, for der var det jo litt mer flerkulturelle pasienter" (i6). Hun fortalte at hun ble utrygg i yrkesutøvelsen da pasientene uttrykte smerte og frustrasjon på en måte hun ikke kjente. Men, fortsetter hun: "Etter hvert fikk jeg større forståelse for dette med flerkulturelle uttrykk som ble lettere å håndtere etter hvert, jeg kunne ingenting om dette i utgangspunktet" (i6). En annen lærer sier: "Jeg ble redd når pasientene uttrykte seg på en annerledes måte enn jeg selv gjør" (i5). Hun fortalte at "jeg greide ikke å håndtere pasientene på en hensiktsmessig og respektfull måte" (i5).

Noen av lærerne fortalte at de ofte ble passive tilskuere når slikt oppsto. En av lærerne husker at hun kalte dette for "opptrinn" (i9) den gangen. Hun refererte til en hendelse med en pasient som "ga fra seg masse hyl, jamret og gråt" (i9). Det var vanskelig å håndtere for personalet. Hun sa: "Mine kunnskaper om kulturelle koder var mangelfulle og muligens snevre, og det samsvarte ikke med den måten jeg hadde lært å uttrykke smerte på" (i9). Hun hadde ikke reflektert over hvordan hennes eget reaksjonsmønster generelt var, og hadde heller ikke lært om ulike tankesett eller kommunikasjonsstiler, slik som Dypedahl og Bøhn (2017) hevder er viktig for å forstå andre kulturer.

En annen lærer fortalte om sine erfaringer i forbindelse med måltidet på sykehjemmet. Dette var et tema som ikke var berørt i hennes opplæring, og dermed oppsto det hun kaller for "en vanskelig situasjon". Læreren forteller:

> Det var ikke kunnskaper verken hos oss eller hos brukeren når det gjaldt kosthold, på hva de skulle spise med hensyn til sykdommen og kulturelle preferanser. Vi

> visste ikke helt hva vi skulle gjøre i forhold til kostholdet, i alle fall på den tiden for meg var det ikke noe jeg hadde satt meg inn i. (i1)

Flere av lærerne forteller om lignende hendelser. En annen forteller:

> Vi hadde pasienter med innvandrerbakgrunn, og når jeg nå tenker tilbake til dette, så blir jeg flau over at vi hadde så lite kunnskap. Jeg vet at vi tilpasset ikke maten, vi bestemte ikke maten, ja, vi tenkte ikke på dem, pasientene altså, som kom til oss. (i5)

For å illustrere hvor galt det kan gå, fortalte en av lærerne om en hendelse hun gjerne skulle vært foruten. De hadde en dement muslimsk pasient på avdelingen som ble gitt svinekjøtt en gang fordi de ikke kunne noe om pasientens kosthold. Dette skapte frustrasjoner og sinne hos ansatte når de oppdaget hva de hadde gjort. De diskuterte hendelsen i teamet og var enige om at dette var en uetisk og uklok handling som ikke burde forekommet.

Noen av lærernes tidligere yrkeserfaring indikerer at de har fått innsikt i flerkulturelle problemstillinger og oppnådd en viss kompetanse i flerkulturalitet. Derimot synes ikke deres tidligere utdanning å ha gitt dem slik kompetanse, verken deres fagopplæring som helsefagarbeidere eller yrkesfaglærerutdanningen. Alle var derimot enige om at dette måtte få mer plass i begge typer utdanninger.

Lærernes bruk av elevenes flerkulturelle praksiserfaringer

På spørsmål om hvorvidt elevenes flerkulturelle erfaringer fra yrkespraksis blir diskutert, analysert og anvendt i skolekontekst, var svarene relativt like. En lærer forklarer dette slik: "Som oftest blir det en kort oppsummering av erfaringer når elevene kommer tilbake til skolen" (i4). På spørsmål om hvorvidt erfaringene blir belyst ut fra flerkulturelle perspektiver, sier en av informantene "nei, ikke i vesentlig grad, hvis ikke elevene selv ønsker å dele når vi snakker om de ulike temaene" (i10). Det var gjennomgående at elevene delte erfaringer hvis de ønsket det. Dette indikerer at elevenes erfaringer ikke settes i en flerkulturell begrepsramme, og at læreren ikke styrer opplæringen i retning av å gi elevene større innsikt i og forståelse for flerkulturelle temaer. Lærerne fortalte at det ikke var veldig mange pasienter per i dag på norske sykehjem med annen landbakgrunn enn den norske, men i hjemmesykepleien var det flere. Siden elevene i hovedsak er utplassert på sykehjem, var det hovedforklaringen på hvorfor ikke temaet ble belyst. Men lærerne syntes det var problematisk når de selv var på praksisbesøk hos elevene og observerte at helsepersonell og pasienter ikke forsto hverandre på grunn av språklige barrierer. På spørsmål om dette ble diskutert i klassen i etterkant, så var ikke det tilfellet. En lærer gir følgende refleksjoner til dette: "Ja, dette kunne være en fin anledning til å vinkle undervisningen inn på flerkulturelle problemstillinger, men det har jeg ikke tenkt på" (i8).

Lærerne kom også raskt inn på dette med lærebøker og læremateriell. De mente at læremateriellet i liten grad tematiserer flerkulturalitet, og at de dermed ikke fikk noe drahjelp herfra. Som en lærer sa: "Dermed er det lett å glemme

dette" (i7). En annen lærer sa: "Det hadde vært fint å bruke elevenes flerkulturelle praksiserfaringer og knytte disse til lærebøkenes teoretiske innhold, men dette gjør vi dessverre i liten grad" (i5). Det samme uttrykte en annen lærer: "Jeg skulle ønske vi brukte elevenes flerkulturelle praksiserfaringer mer og at lærebøkene omhandlet temaet på en annen måte" (i3). Selv om vi finner det flerkulturelle perspektivet uttrykt både i formålet og i kompetansemålene i læreplanen for helsearbeiderfagutdanningen, ble ikke dette tatt hensyn til. "Jeg tror vi er veldig styrt av lærebøkene våre, det må jeg innrømme", sier en av lærerne (i2).

Yrkesretting med vekt på flerkulturelt kosthold, flerkulturell helsekommunikasjon og kultursensitivitet

Dette omhandler blant annet hvordan teoretiske kunnskaper og praksiserfaringer gjøres yrkesrelevante for helsefagarbeiderens fremtidige yrkesutøvelse.

Flerkulturelt kosthold

Blir opplæringens kompetansemål i kosthold kulturtilpasset og yrkesrettet? Om dette forklarer en av lærerne at "jo, tema som halal og faste er noe vi jobber med" (i2). Videre sier en annen: "Hvis vi har elever som for eksempel er muslimer, så kjøper vi inn halal-kjøtt og bruker det i undervisningen" (i8). En annen forteller lignende: "Hvis ingen av elevene selv bruker halal-mat, så blir selvfølgelig ikke dette innkjøpt" (i6). "Men vi snakker om hva halal er da, altså vi forklarer hva ordet betyr" (i4), sier en annen. En av lærerne presiserer: " …utgangspunktet er om elevene faster og har et muslimsk kosthold, da er det lettere å forholde seg til dette" (i3). "Vi må være forsiktige også slik at vi ikke sårer elevene ved å stigmatisere kulturer", sier en annen (i10). Ut fra det lærerne fortalte, var kostholdsundervisningen kun elevsentrert, altså om elevene selv hadde for eksempel et muslimsk kosthold. Ut fra lærernes fortellinger ble undervisningen lite tilrettelagt mot elevenes fremtidige yrke. En lærer sier at "elevene får ofte bestemme selv hva vi skal lage på kjøkkenet" (i8). På spørsmål om det ble tenkt yrkesretting i lys av kulturelle tilpasninger, ble svaret "nei" (i8). Dette gjelder også norsk tradisjonsmat, rettet mot den største brukergruppen av helsetjenester. Forklaringen synes å være at elevene får stort sett selv bestemme hva de vil lage, og da er "ikke norsk tradisjonsmat populært", hevder en lærer (i6). Å bruke elevenes interesser samsvarer ikke nødvendigvis med det de møter i yrkeslivet. Lærerne ble også spurt om hvorvidt elevene lærer noe om tabuer om mat, krydder, matvaresammensetninger og sykdommer knyttet til et flerkulturelt kosthold. Her ble svaret gjennomgående nei, bortsett fra diabetes. "Vi snakker om sykdommen diabetes, da", sier en av dem (i9), og en annen sier at "det er mange fra Pakistan for eksempel som har fått denne diagnosen" (i5). "Men vi har ikke fokus på selve matlagingen og sykdommer", sier en av lærerne (i4), som også nevner stor utbredelse av diabetes blant pakistanske kvinner.

Funnene forteller at lærernes undervisning i temaet kosthold og ernæring ikke ble nevneverdig yrkesrettet og tilpasset pasientgrupper fra andre land og kulturer. Ut fra kompetansemålene i helsearbeiderfagutdanningen bør kostholdsundervisningen være yrkesrettet, men slik lærerne uttalte seg om dette, var ikke dette tilfellet. Temaet ble i hovedsak styrt av elevenes impulsive preferanser, bortsett fra halal og faste.

Flerkulturell helsekommunikasjon og kultursensitivitet

Helsepersonells kommunikasjonsferdigheter kan ha store konsekvenser for pasienter med lav *health literacy*, altså pasientenes evne til å forstå og kommunisere om egen helse. Elevene vil etter all sannsynlighet møte disse pasientene i sin yrkeskarriere – derfor er det interessant å få et innblikk i hvordan lærerne berører temaet flerkulturell helsekommunikasjon. En av lærerne forteller at hun utarbeidet en elevoppgave der elevene fikk i oppgave å spille en pakistansk pasient og en norsk pasient. Hensikten med elevoppgaven var å "bevisstgjøre elevene hvordan de kommuniserte med pasientene ut fra ulike kulturelle bakgrunner" (i9). Resultatet ble det samme hver gang – "de etnisk norske kjente til hvordan de ville kommunisere med fru Olsen, men de er mer tilbakeholdne når de skal kommunisere med fru Ali", forteller hun (i9). Videre forteller hun at "jeg synes det er vanskelig å utdype ulike kommunikasjonsstiler og kultursensitivitet" (i9). En annen lærer poengterte dette slik: "At elevene lærer om ulike kommunikasjonsstiler, er viktig kunnskap som de vil få bruk for i praksis. Derfor trener vi på ulike kommunikasjonsuttrykk ved hjelp av rollespill" (i3). Hun var en av de få som tok tak i ulike kulturelle kommunikasjonsformer. Hun erfarte at rollespill var en god metode for å få frem det flerkulturelle perspektivet.

Lærerne var enige om at elevene burde lære om ulike kommunikasjonsstiler for å hindre misforståelser. De løftet og frem en annen dimensjon hvor elevene selv slet med det norske språket, både skriftlig og muntlig, noe som førte til kommunikasjonsutfordringer, både mellom elev–lærer og elev–pasient. Dette gjør opplæringen mer komplisert, og som en lærer sa: "Dette belyses sjelden, men er ikke desto mindre viktig å ta opp" (i5). At elevene ikke behersket det norske språket, var en av grunnene til at temaene ikke ble yrkesrettet, mente flere, samt at de ikke hadde tenkt så mye over det å bruke elevenes flerkulturelle kompetanse. Det meste ble overskygget av at flere elever ikke kunne så godt norsk. En av lærerne sier følgende:

> Mange av elevene kan ikke godt norsk, dette gjelder både skriftlig og muntlig, for du må ha denne kompetansen når du jobber i yrket. Særlig det muntlige språket, da, spesielt som helsefagarbeider. Det å uttrykke seg såpass dårlig som mange av dem gjør, gjør at kommunikasjonen med pasientene blir dårlig. Det kan jo være pasienter som hører dårlig og ser dårlig. De [pasientene] som er på sykehjem, er jo sykere nå, har jeg skjønt, enn de var før, for en 10–15 år siden da jeg selv jobbet i helsevesenet. (i8)

En lærer fortalte at da hun jobbet på en skole hvor det var flere elever med annen landbakgrunn, var dette med kulturelle problemstillinger mer nærliggende å snakke om. "Ingen av de arbeidsoppgavene jeg har laget til nå, inneholder noe av dette. Dette er litt flaut, men jeg har ikke koblet flerkulturalitet til det" (i5). Om årsaken sier hun videre:

> Jeg føler at på den skolen jeg jobbet før, da var det så tydelig at vi var flerkulturelle, så hadde vi det flerkulturelle som det overordnede tema. Men på den skolen jeg er nå, er vi tilnærmet en etnisk hvit skole, hvis jeg kan kalle det det, så nå er det ikke mye søkelys på det. Ikke sånn overordnet på samme vis som før, da. (i5)

Hvis flerkulturelle tema ble tatt opp i undervisningen, var det rettet mot elevene selv, ikke at de ville møte en sammensatt pasientgruppe.

Selv om det flerkulturelle samfunn er beskrevet både i overordnet del av læreplanverket og i enkelte kompetansemål, er det få av lærerne som berører temaet. En av lærerne sier at "ja, det er jo kompetansemål i læreplanen, så da tar vi det opp, men ikke slik gjennomgående i hele opplæringsløpet. Egentlig så har jeg ikke tenkt så mye over det før du sier det" (i1). Lærerne poengterer at flerkulturelle spørsmål behandles som et avgrenset tema i undervisningen, i tråd med at lærebøkene behandler dette temaet i et separat kapittel. "Ja, det blir litt oppdelt, det er ikke så integrert i hverandre, og lærebøkene viser ikke dette heller", sier en av dem (i7). Funnene viser her at lærerne tematiserte flerkulturelle problemstillinger hvis elevene selv hadde en annen landbakgrunn og selv ønsket å snakke om dette.

Diskusjon

Med det første forskningsspørsmålet ønsket jeg å få innsikt i om lærernes vurdering av sin egen flerkulturelle kompetanse kunne spille inn og være en forklaringsfaktor for hvordan de praktiserte flerkulturelle problemstillinger i egen undervisning.

Ifølge flere forskere er det å inneha flerkulturell kompetanse noe som vil være med på å gjøre det lettere å forstå og anerkjenne annerledeshet og bidra til å gjøre kommunikasjonen mellom pasienter og helsefagarbeidere mer hensiktsmessig (Blanchet Garneau, 2016; Jenum & Pettersen, 2014; Lasonen & Teräs, 2016). Derfor er flerkulturell kompetanse viktig både for elevene og for lærerne som skal formidle kunnskapen. For å få et innblikk i dette ønsket jeg å få frem lærernes egne yrkeserfaringer og eventuelle utdanning knyttet til flerkulturalitet. For noen tiår siden var flerkulturelle problemstillinger lite vektlagt i faglærerutdanningen eller yrkesfaglærerutdanningen, noe som forklarer at noen av informantene i studien ikke har denne kompetansen fra sin tidligere utdanning. Derimot er det påfallende at heller ikke relativt nyutdannede lærere med yrkesfaglærerbakgrunn husker noe spesifikt om dette fra sin lærerutdanning som "har satt spor", slik de

beskriver det. Dette kan bety at yrkesfaglærerutdanningen ikke har vektlagt fler-kulturelle problemstillinger i opplæring av yrkesfaglærerne for å utvikle lærer-nes flerkulturelle kompetanse, noe som kan gi implikasjoner for opplæringen av helsefagarbeidere i videregående skole. Halvparten av lærerne i studien har selv bakgrunn som fagarbeidere, og har erfaring fra blant annet sykehjem og innenfor hjemmesykepleie. Noen av dem fortalte om hvordan de opplevde manglende kunnskap og erfaringer i møte med pasienter med annen kulturell bakgrunn enn de selv hadde. Dette skapte både frustrasjoner og ubehageligheter, fortalte de, som de heller ikke ønsket for sine egne elever. Likevel synes informantene i denne studien i liten grad å bruke slike erfaringer og refleksjoner over sin egen faglige utrygghet og kulturelle væremåte i undervisningen. Ifølge både Tuncel og Paker (2018) og Papadopoulos et al. (1998) bør man være sin egen kultur be-visst for å kunne forstå andre. For eksempel fortalte lærerne at de aldri hadde tenkt over hvordan de selv reagerte på for eksempel smerte eller redsel og at dette kan uttrykkes ulikt i de ulike kulturene, slik Nielsen og Birkelund (2009) beskriver danske sykepleieres møte med pasienter fra andre kulturer. Fra sin praksis som helsefagarbeidere innså lærerne at de hadde liten kunnskap om pasi-entene de behandlet, noe som ifølge Serizawa (2007) og Tayab og Narushima (2015) er avgjørende i omsorgsarbeid. De hevder videre at helsearbeidere bør ha kjennskap til pasientenes historiske og sosiokulturelle bakgrunn for å kunne gi kultursensitiv omsorg. Dette er vesentlig for å redusere helseforskjeller, ifølge Blanchet Garneau (2016).

Studien viser altså at lærerne har hatt lite eller ingen opplæring i flerkulturali-tet fra sin fagutdanning som helsefagarbeidere eller fra sin lærerutdanning. Sam-tidig synes heller ikke deres tidligere yrkespraksis å ha gitt dem økt flerkulturell kunnskap og kompetanse. Dette kan forklare at lærerne ikke forankrer egen undervisning av fremtidens helsefagarbeidere til flerkulturelle problemstillinger basert på deres tidligere erfaringer eller kompetanse. Dette er i tråd med Alpers (2017) og Nielsen og Birkelunds (2009) studier om at opplæring i flerkulturell forståelse i høyere helseutdanninger er liten, noe som i neste omgang bidrar til å undergrave aktualiteten av dette temaet i opplæringen av helsefagarbeidere i vi-deregående skole. Mangelfullt kunnskapsgrunnlag og faglig utrygghet må der-for sies å få implikasjoner for innholdet i lærernes undervisning (Hiim & Hippe, 2001).

Med det andre forskningsspørsmålet ønsket jeg å få kunnskap om hvordan lærere implementerer flerkulturalitet i opplæringen i lys av lærerplanens formål og kompetansemål i helsearbeiderfagutdanningen (Udir, 2006). Helsearbeider-fagutdanningen utdanner fremtidens helsefagarbeidere, der opplæringen i et yr-kesdidaktisk perspektiv bør yrkesrettes og gjøres relevant for de utfordringer som helsefagarbeidere møter i sin yrkespraksis. Dypedahl og Bøhn (2017) hevder at fremtidens helsefagarbeidere vil møte pasientgrupper med ulike kommunika-sjonsmåter og livsverdener. Studien har i denne sammenheng vektlagt hvordan

flerkulturell kommunikasjon og elevenes praksiserfaringer implementeres i opplæringen. Basert på intervjuer av de ti yrkesfaglærerne, viser studien at lærerne sjelden tar opp flerkulturelle temaer generelt i undervisningen, slik de uttaler seg om dette.

Kunnskap om *health literacy* (Jenum & Pettersen, 2014), kulturell identitet (Papadopoulos et al., 1998) og kulturell følsomhet (Lasonen & Teräs, 2016; Qureshi, 2009) fremstår som vesentlig i god pasientomsorg. Lærerne hadde ikke klare begrunnelser for hvorfor de selv ikke underviste i disse temaene for å forberede elevene på et kulturelt mangfoldig pasientgrunnlag. Ut fra teori og tidligere forskning kan det å bli presentert for andres kulturelle væremåter og livsverden gjøre at elevene reflekterer over sin egen adferd, holdninger og verdigrunnlag, noe som vil være nødvendig for å kunne utføre en god og omsorgsfull jobb (Weigel et al., 2007). Ifølge Jenum og Pettersen (2014) vil pasienter med lav *health literacy* være en del av pasientgrunnlaget som helsefagarbeideren vil møte i fremtiden. En viktig del av opplæringen er å forstå når pasientene er usikre på egen helseadferd (Gele et al., 2016). Derfor er det å ha kunnskap om ulike kommunikasjonsstiler, for eksempel hvordan sykdom kommuniseres i ulike kulturer, være en viktig yrkeskompetanse for en helsefagarbeider (Tuncel & Paker, 2018). En forklaring på at lærerne ikke tematiserte flerkulturell helsekommunikasjon i opplæringen er dels manglende kompetanse fra deres egen lærerutdanning, dels at de ikke omsatte og utnyttet deres tidligere yrkespraksis.

En annen forklaring er hvordan lærerne vurderte elevenes yrkespraksis fra utplassering i yrkesfaglig fordypning (YFF). De fleste elevene gjennomførte sin praksis i sykehjem, der de færreste pasienter har en flerkulturell bakgrunn. Men en viktig yrkeskompetanse dreier seg også om evnen til å omstille seg og tilpasse kunnskaper og ferdigheter til et samfunn i raske endringer (Weigel et al., 2007). I dagens samfunn arbeider de fleste helsefagarbeidere i hjemmesykepleie eller ved ulike omsorgsinstitusjoner (Hjemås et al., 2019), der pasientgrunnlaget om noen få år blir mer sammensatt og mangfoldig. Slike perspektiver var fraværende i lærernes opplæring.

Til tross for at noen elever hadde møtt pasienter med annen kulturell bakgrunn i sin yrkespraksis og dermed hadde erfaringer fra en flerkulturell pasientgruppe, ble ikke disse yrkespraktiske flerkulturelle erfaringene anvendt i opplæringen og delt med de andre elevene. Nettopp det å bruke elevenes erfaring fra yrkespraksis inn mot den teoretiske forankringen kan bidra til å yrkesforankre opplæringen (Gilje, 2017; Grimen, 2008; Hiim & Hippe, 2001; Yusof et al., 2017) og gjøre elevene tryggere i tilsvarende praksissituasjoner. Som Sund et al. (2009) og Hiim (2013) poengterer må yrkesopplæringen være relevant for det yrket som elevene skal praktisere i. Derfor er nettopp flerkulturelle problemstillinger viktig å tematisere i opplæringen (Gilje, 2017; Grimen, 2008; Säljö, 2014). Den flerkulturelle tilnærmingen vil også gjøre opplæringen mer samfunnsrelevant, slik Koenen et al. (2015) mener den bør være for fremtidens yrkesutøvere.

Det å dele erfaringer kan være med på å utvikle trygghet i yrkesfunksjonene slik at man kan være i stand til å ta situasjonsavhengige avgjørelser (Gilje, 2017; Hiim & Hippe, 2001).

Helsefagarbeiderutdanningen skal forberede fremtidige helsefagarbeidere til å ivareta alle pasienter, noe som indikerer at yrkespraksis og yrkesrelevans bør være fremtredende perspektiver i opplæringen. Denne studien viser derimot at opplæringen i hovedsak skjedde på elevenes premisser, noe som særlig kom frem når temaet var kosthold og ernæring, der det flerkulturelle perspektivet var fraværende, styrt av elevenes ønsker og interesser. Dette kan være med på å gi elevene både en urealistisk og en livsfjern yrkesfagopplæring, som også går på bekostning av sammenhengen mellom teoretisk kunnskap og praksis. Kostholds-faget ble lite yrkesrelatert til yrkesfunksjoner i et flerkulturelt perspektiv, noe som kan gi implikasjoner for elevenes erfaringer av hva som ventes i yrkes-situasjoner for helsefremmende og kulturtilpasset kosthold for pasientene (Bergsli & Hellne-Halvorsen, 2020). Opplæringen i skolekonteksten rettes i liten grad mot elevenes fremtidige yrke, noe som indikerer et gap mellom det elevene lærer i skolen og samfunnets behov for kulturkompetente helsefagarbeidere (Ko-enen et al., 2015).

Ifølge flere forskere kan det å inneha flerkulturell kompetanse bidra til å forstå og anerkjenne annerledeshet og gjøre kommunikasjonen mellom pasienter og helsefagarbeidere mer hensiktsmessig (Blanchet Garneau, 2016; Jenum & Petter-sen, 2014; Lasonen & Teräs, 2016). Videre fremholdes også kunnskap om pasien-tenes historiske og sosiokulturelle bakgrunn for å gi kultursensitiv omsorg for å redusere helseforskjeller (Blanchet Garneau, 2016). Derfor er flerkulturell kom-petanse viktig både for elever og for lærere. Lærerne i denne studien var enten faglærere eller yrkesfaglærere. Samtidig hadde halvparten av lærerne yrkesprak-sis som helsefagarbeidere med erfaringer fra arbeid med flerkulturelle pasienter. En vesentlig forklaringsfaktor for mangelfull opplæring i flerkulturalitet i helse-arbeiderfagutdanningen skyldes at lærerne ikke brukte sine yrkeserfaringer som helsefagarbeidere i egen undervisning og at deres utdanning var preget av lite eller ingen opplæring i flerkulturalitet. En konsekvens av dette er at lærerne, som de uttrykker det selv, manglet kunnskap og kompetanse i flerkulturalitet for egen undervisning.

Avslutning

Problemstillingen for denne studien var: Hvordan praktiserer yrkesfaglærere flerkulturalitet i helsearbeiderfagutdanningen? Ifølge yrkesfaglærerne er ikke flerkulturalitet et tema som i stor grad blir aktualisert i helsearbeiderfagutdan-ningen, til tross for hva læreplanens formål og kompetansemålene viser. I helse- og omsorgssektoren vil helsefagarbeiderne møte pasienter med annen kultur- og landbakgrunn enn dem selv. Det vil derfor være et behov for å implementere

ulike flerkulturelle problemstillinger i opplæringen slik at fremtidens helsefagarbeidere er forberedt på det flerkulturelle yrkeslivet. De nye læreplanene i Fagfornyelsen (LK2020) trådte i kraft i 2020 på vg1, og har videreført de flerkulturelle perspektivene fra LK06. I internasjonal forskning er flerkulturelle tematikker vektlagt som en tverrfaglig og overførbar kompetanse. For å sikre at flerkulturalitet reflekteres i opplæring av helsefagarbeidere, viser denne studien at flerkulturelle problemstillinger bør få en styrket plass i lærerutdanninger generelt og i yrkesfaglærerutdanning spesielt som utdanner yrkesfaglærere til helsearbeiderfagutdanningen.

Om forfatteren

Oddhild Peggy Bergsli er universitetslektor ved OsloMet – Storbyuniversitetet, Fakultet for lærerutdanning og internasjonale studier, Institutt for yrkesfaglærerutdanning. Hun underviser på bachelor i helse- og oppvekstfag i fagene etikk, kosthold, ernæring, helse og helsekommunikasjon og yrkesdidaktikk. Hennes interessefelt er innenfor helse- og ernæring og yrkespedagogikk i et flerkulturelt perspektiv i utdanning og yrker.

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Teachers' perceptions on relevant upper-secondary vocational graduate competencies and their development

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Abstract

Finnish initial vocational education and training aims for graduate employability by emphasising self-directed learning and workplace learning. However, little is known about what competencies teachers consider relevant for graduates, how teachers address competencies in their instruction and how they perceive the benefits of workplace learning. Therefore, this study aims to highlight teachers' perceptions and their practices on these topics. This is a qualitative interview study conducted in cooperation with a large Finnish vocational education provider. Participants of the study were teachers in automotive engineering, electrical and automation engineering, mechanical and metal engineering, and building service technology. The data were collected with semi-structured qualitative interviews and analysed using qualitative, abductive content analysis. The research findings indicate that teachers consider fundamental domain-specific competencies and work-related attitudes paramount for graduates as these promote professional expertise and employability. Secondly, teachers prefer to teach domain-specific competencies. However, the emergence of self-directed learning demands that teachers be pedagogically competent. Thirdly, teachers deem workplace learning beneficial but also consider that school may offer more equal and versatile education opportunities for everyone. The research findings enrich the scientific discussion on vocational graduate competency needs and vocational teaching and support the development of vocational education systems.

Keywords: vocational education and training, competence, labour market, teaching

Introduction

Fluctuation of the international economy, globalisation, innovative educational technology and more diverse student populations affect vocational teachers' work worldwide (Jossberger et al., 2010). Quite often, governments have reacted by imposing reforms based on competence-based education and self-directed learning without consulting educators (Billett, 2014) and collaborating with them.

Consequently, more knowledge is needed on how teachers perceive their tasks and relevant learning contents for students (Billett, 2014; Nylund & Gudmundson, 2017), advantageous instructional structures (Löfgren et al., 2020), attitude towards self-directed learning in their field and readiness to support it (Jossberger et al., 2010) and professionalism in their trades (Köpsén, 2014). This is crucial as vocational teachers are gatekeepers to employment for their students: teachers mediate curricular contents and industry competence expectations, shape what students learn and ultimately contribute to graduate employability (Berner, 2010; Billett, 2014).

In this study, we aim to explore how initial vocational education and training (IVET) teachers perceive graduate competency requirements and competency development. We address three research questions: How do teachers perceive upper-secondary IVET graduate competencies? Which instructional practices do teachers employ to teach competencies? How do teachers perceive the effect of workplace learning on students' learning of competencies?

Essential competencies for upper secondary IVET graduates

European vocational education aspires for continuous professional development and labour mobility (Mulder & Winterton, 2017). These objectives shape the way competence is understood within IVET. Competence refers to one's overall ability to adapt and act; it is further divided into several, integrated sub-clusters of knowledge, skills and attitudes, labelled as competencies (singular 'competency', see Blömeke et al., 2015; Mulder & Winterton, 2017; Toom, 2017). *Domain-specific competencies* illustrate competency clusters related to certain trade-specific job tasks (e.g., Gekara & Snell, 2018; Mulder, 2014), for instance, turning or welding. *Domain-general competencies* refer to more generalisable competency clusters that allow workers to adapt at different stages of their professional careers (Mulder, 2014; Nägele & Stalder, 2017), for example social competency and motivation to work. Both domain-specific and -general competencies are pivotal for professional work because only together they enable an individual to cope with the daily work and to adapt and act when necessary (Mulder, 2014). In addition, especially domain-general competencies should not be seen only as a means to excel in the world of work as they can also help one to pursue a good life (Mulder, 2014).

Although scholars agree to some extent about the nature of the concept of competence, its exact definition and content stay uncertain and ambiguous (Blömeke et al., 2015; Mulder, 2014; Nägele & Stalder, 2017; Toom, 2017). It is debatable, for example, how competence affects performance: is it the competence as a whole (i.e., a holistic view), or do single knowledge, skills and attitudes determine whether one succeeds (i.e., an analytic view; see Blömeke et al., 2015; Mulder, 2014)? Mulder (2014) argues that the discussion about competence covers three general perspectives. Behaviouristic functionalism is deeply analytic and stresses the definition, selection and training of single, even minuscule domain-specific competencies (Mulder, 2014, p. 128). Integrated occupationalism is both analytic and holistic and acknowledges also domain-general competencies; still, it tends to overemphasise workplace competency needs (Mulder, 2014, p. 129). Situated professionalism is the most holistic perspective, assuming that an individual's competence acquires its meaning only in a specific community of practice (Mulder, 2014, p. 130; see also Lave & Wenger, 1991). It is also criticised as being too imprecise for the definition and selection of curricular learning contents (Mulder, 2014).

Analytic and holistic approaches can be seen as a continuum and usually the scientific debates as well as the vocational education systems combine features from the three perspectives (Blömeke et al., 2015; Mulder, 2014). For example, situated professionalism has strongly influenced the current understanding of workplace learning, which is an important element in practically all vocational education systems (Berner, 2010; Mulder, 2014). Also today, (technical) vocational teachers train minuscule skills at school so that students could be more work-ready and confident when they start learning at the workplace (Berner, 2010). Still, due to the societal aspirations for graduate employability, labour mobility and professional development, the occupationalistic viewpoint stands out emphasising that curricular contents should primarily be based on workplace competency needs (Mulder, 2014; Mulder & Winterton, 2017).

To become employed, vocational students should not only learn the theoretical knowledge of their trades but also manual skills to apply their knowledge (Berner, 2010; Gekara & Snell, 2018). Still, profound domain-specific competencies may be unrealistic expectations (e.g., Köpsén, 2014; Pylväs et al., 2018). Rather, graduate job seekers should show potential for the trade and distinguish themselves with domain-general competencies (Löfgren et al., 2020). There are multiple frameworks illustrating important competencies but these may be too approximate and distant to offer insights into trade-specific competency needs (Mulder, 2014; Mulder & Winterton, 2017). Thus, in the following, we focus specifically on technical-trade IVET graduate competency expectations identified in earlier research and elaborate the views of employers (Löfgren et al., 2020) and teachers (Berner, 2010; Vähäsantanen & Hämäläinen, 2018).

To access professional communities, IVET graduates need *work-related attitudes*, for example adherence to company rules and working times, tidiness, initiative, and a willingness to help (Löfgren et al., 2020; Nägele & Stalder, 2017; Pylväs et al., 2018; Vähäsantanen & Hämäläinen, 2018). *Social competency* serves the same aim. It can emerge as respect, empathy, friendliness and good manners, but also as skilled communication and collaboration (Berner, 2010; Vähäsantanen & Hämäläinen, 2018). Besides, IVET graduates should show *professional self-perception* and evaluate themselves honestly but positively (Van Houtte et al., 2012). Young graduates often consider their professional proficiency and status vulnerable, which results in being overly eager or cautious (Berner, 2010; Löfgren et al., 2020).

To keep up with working and constant development, IVET graduates need *motivation to work* (Pylväs et al., 2018). Besides, they need *learning competency*: 1) Motivation to learn includes openness and alertness for learning opportunities (Berner, 2010; Jossberger et al., 2010; Nägele & Stalder, 2017). 2) Ability to learn encompasses various metacognitive skills paramount for modern self-directed learners; this includes learning need detection, goal setting and self-assessment (De Bruijn & Leeman, 2011; Jossberger et al., 2010). However, these are not innate but require active guidance from teachers (Jossberger et al., 2010).

Moreover, *language competency* is necessary to read and understand equipment manuals (Berner, 2010; Löfgren et al., 2020). *Mathematical competency* enables logical, abstract and three-dimensional thinking, which is appreciated in the technical trades (Berner, 2010). Such general disciplines as languages and mathematics are also important *per se* as they help to understand why the work has to be done in a certain way and not just how (cf. Bakker & Akkerman, 2019). Unfortunately, general disciplines within technical vocational programmes have also been undervalued because they do not necessarily produce direct workplace relevance (Bakker & Akkerman, 2019; see also Löfgren et al., 2020). This challenges especially teachers and educational institutions to highlight the value of general disciplines as a means for students' personal growth, professional development, eligibility for future studies and lifelong learning (Mulder, 2014; Niemi & Rosvall, 2013; OECD, 2020). Such teacher arguments can also balance the possibly short-sighted and instrumental industry competency needs (cf. Mulder, 2014). Moreover, due to automation and inevitable alterations of the labour market competency needs, OECD (2020) recommends that IVET institutions ensure that IVET graduates can study later on. Overall, earlier research shows that technical-trade IVET students are heterogeneous in terms of their competencies (Löfgren et al., 2020; Niemi & Rosvall, 2013; Vähäsantanen & Hämäläinen, 2018). This raises questions about the organisation of successful vocational education.

Characteristics of vocational schooling

Vocational studies usually take place at a workplace or school. Largely the same competencies can be taught at either location (Berner, 2010; Köpsén, 2014). In Finland and Sweden, vocational studies used to take place mostly at school but workplace learning (WPL) has increased since the 2000s (Mårtensson et al., 2019; Rintala et al., 2018). WPL is commonly characterised as a situated learning process, where novices participate in the actions of communities of practice, gradually acquire its membership and learn vocational proficiency (Berner, 2010; Lave & Wenger, 1991; Mulder, 2014). WPL environments may offer students experience with advanced equipment, complex customer assignments (see Vähäsantanen & Hämäläinen, 2018) and employment (Berner, 2010; Löfgren et al., 2020). However, firms compete on an open market. Many lack the time to guide apprentices and assign only organisation-specific and monotonous tasks (Gekara & Snell, 2018; Isopahkala-Bouret, 2010; Vähäsantanen & Hämäläinen, 2018). Besides, employers provide WPL places to screen potential employees; therefore, many prefer motivated and skilled apprentices (Berner, 2010; Pylväs et al., 2018).

Within school-based learning, novices conduct trade-specific learning assignments with professional equipment under teachers' guidance (Berner, 2010). Vocational schools do not compete for customers. They may consider various industry competency needs and provide students with time to practise (Berner, 2010; Jossberger et al., 2010; Vähäsantanen & Hämäläinen, 2018). IVET teachers are usually both experienced craftspersons and trained educators so they may scaffold individual learning assignments for the weak and unmotivated (Berner, 2010; Billett, 2014; Köpsén, 2014). However, proponents of WPL have criticised school-based learning presuming that the school mediates competencies relevant only in the school environment and not in professional practice (Berner, 2010). Some employers offering WPL periods have even questioned the domain-specific expertise of IVET teachers (Vähäsantanen et al., 2009).

Despite their differences, workplace learning (WPL) and school may complement each other (Bakker & Akkerman, 2019). Their interplay creates a boundary zone between school and work, where students, teachers and workplace supervisors overcome various social and cultural boundaries between school and workplace, learn important competencies and where teachers act as gatekeepers to work (Bakker & Akkerman, 2019; Berner, 2010; Köpsén, 2014; Mårtensson et al., 2019). According to Bakker and Akkerman (2019) teachers and workplace supervisors may instigate student learning through boundary crossing when four interrelated processes are involved.

At start, teachers and workplace supervisors should together *identify* their tasks, roles and responsibilities so that they could conceive how they can complement each other when advancing student learning (Bakker & Akkerman, 2019). Then, they should agree on and align practices that help them to *coordinate*

students' learning processes (Bakker & Akkerman, 2019). As teachers and workplace supervisors interact, they become aware of their own and their counterparts' perspectives; thus, they may engage in *mutual reflection*, which helps them to further reconcile different perspectives for the sake of student learning and also for their personal development (Bakker & Akkerman, 2019). Consequently, boundary crossing may *transform* prevailing instructional structures into more effective ones or novice students towards more mature professional thinkers and actors (Bakker & Akkerman, 2019).

Teachers face a contradictory challenge when coordinating student's boundary crossing. On the one hand, they should preserve the boundary and pay attention to students' pedagogical fostering (Berner, 2010; Köpsén, 2014). As teachers support and encourage students and create a safe atmosphere, they reinforce students' learning processes (Köpsén, 2014). On the other hand, industry expects teachers to remove the boundary by advancing professional growth and preparing students for the world of work (Berner, 2010; Köpsén, 2014). Teachers as experienced professionals themselves should mediate domain-specific expertise to students, give examples of professional work and show instances of craftsperson habitus; that is, they should explain how a professional looks, feels, acts and communicates (Berner, 2010).

Teachers' previous work experience and studies affect whether they identify themselves as craftspersons or pedagogues (Berner, 2010; Mårtensson et al., 2019; Nylund & Gudmundson, 2017). Craftspersons value domain-specific competencies; pedagogues also value pedagogical methods, critical thinking and such domain-general subjects as languages and mathematics (Nylund & Gudmundson, 2017). Technical-trade teachers traditionally prefer the craftsperson habitus and some question pedagogical training, although 'common sense' cannot substitute for it (Berner, 2010; Köpsén, 2014; Nylund & Gudmundson, 2017). The emergence of competence-based education further affects teacher habitus and steers the focus from teaching to coaching in European IVET systems (e.g., De Bruijn & Leeman, 2011; Isopahkala-Bouret, 2010). Examples from Finland are given in the following.

Recent developments in the Finnish IVET

Until the 1980s, Finnish initial vocational education and training (IVET) was a relatively school-based system. Since the 1990s, it has been criticised for weak support for graduates' transition from school to work. Beginning in the early 2000s, competence-based education and workplace learning were gradually implemented, aiming to strengthen the workplace relevance of IVET and competitiveness of the Finnish economy (see Isopahkala-Bouret, 2010; Nylund & Gudmundson, 2017; Rintala et al., 2018).

Competence-based education prefers workplace learning and individualised, self-directed learning to collective, teacher-led schooling (Jossberger et al., 2010;

Rintala et al., 2018). It turned teachers into coaches who organise learning and help students to reflect on their learning outcomes (De Bruijn & Leeman, 2011; Isopahkala-Bouret, 2010). The latest legislative reform (2015–2018) cemented competence-based education and workplace learning (WPL) as a foundation of Finnish IVET but also emphasised its workplace relevance through customer-oriented and demand-driven training (Ministry of Education and Culture, 2018). Local education providers gained high autonomy to steer their activities but their state funding was coupled with student graduation and employment rates (Ministry of Education and Culture, 2018).

Students in the current Finnish IVET can form highly individualised learning paths but they are also expected to be relatively self-directed learners (Ministry of Education and Culture, 2018; Rintala et al., 2018). In fact, cooperation and coordination are needed to ensure that students can connect competencies they learn when crossing the boundaries between school and workplace (Bakker & Akkerman, 2019). If students cannot reflect and connect, what they have learnt remains inert; thus, the pursued quality of vocational training also remains elusive (Bakker & Akkerman, 2019).

Workplace relevance of vocational curricular contents and instructional structures may be reasonable when graduate employability is to be furthered (cf. Isopahkala-Bouret, 2010; Rintala et al., 2018). However, depending on the local culture, workplace relevance should not be the sole purpose of vocational education. In fact, Finland and other Nordic countries have traditionally upheld a universalistic VET culture, where students are supported both in their professional growth and in their personal growth into adulthood and citizenship (Virolainen & Stenström, 2014). Implementation of competence-based education and excessive workplace learning may mean that students only focus on learning organisation-specific job tasks (Gekara & Snell, 2018; Isopahkala-Bouret, 2010; Pylväs et al., 2018; Vähäsantanen & Hämäläinen, 2018). Competence-based education may suit better liberal VET cultures (e.g., UK) where schooling primarily aims to educate workers into specific positions in different firms; however, liberal VET cultures also pay less attention to students' professional versatility and social inclusion (Virolainen & Stenström, 2014).

Furthermore, successful competence development requires that the aspired knowledge, skills and attitudes are precisely defined because expectations differ between and within economic sectors and organisations (Mulder, 2014; Nägele & Stalder, 2017). To organise meaningful vocational education that responds to local competency needs and prepares students for future studies and a good life, such actual practitioners as teachers, students and local stakeholders must be consulted (Billett, 2014; Mulder, 2014).

Aim of the study

This study aims to determine how initial vocational education and training teachers perceive graduate competency requirements and competency development. We focus on the following research questions and their sub-questions.

1) How do teachers perceive the competencies of upper-secondary initial vocational education and training graduates?
   a) Which competencies do the teachers expect of graduates?
   b) What kind of experiences do the teachers have about graduates' accomplishment of competencies?
   c) Which competencies do the teachers themselves teach?
2) Which instructional practices do the teachers employ to teach competencies?
3) How do the teachers perceive workplace learning as it affects learning of competencies?
   a) Which competencies do the students develop during workplace learning?
   b) What conditions and teacher contributions are needed for students' successful workplace learning?

Method

Context

This study is carried out in collaboration with a large Finnish VET provider that offers approximately 50 three-year upper-secondary vocational qualification programmes and has annually some 10,000 students. The study was conducted in the technical vocational fields of automotive engineering, mechanical and metal engineering, building service technology, and electrical and automation engineering. These programmes offer education for some 600 students annually.

Focus on the technical-trade teachers enabled an in-depth scrutiny, given that teaching practices and cultures differ slightly among the vocational trades; still, the views of individual teachers always reflect some general issues in the school system concerned (Köpsén, 2014). Moreover, every above-mentioned vocational field has its own national and school-level curriculum. At the time of this study, there were reformations in progress. This stresses teachers' views.

Participants

The participants of this study (N=12, age: 48–62, mean: 48.6 years, two women and ten men) were recruited with the assistance of the VET provider according to the following criteria: 1) They instructed teenage (between ages 16–19) upper-secondary IVET students on domain-specific, substantial knowledge; 2) They taught in some of the four above-mentioned study programmes; and 3) They took

part voluntarily. They did not obtain incentives through their participation and were asked for written consent. Due to their voluntariness and serious dedication for this study, it is likely that the participants represented the most active members of the teaching staff. These teachers had the highest degree awarded in their vocational fields (a tertiary-grade engineering diploma), supplemented by pedagogical studies (60 credits) and at least three years of field-specific job experience (range: 3–30 years, mean: 17.2 years). Their teaching experience spanned from 5 to 25 years (mean: 14.4 years).

Procedure and materials

This is an explorative interview study (cf. Brinkmann & Kvale, 2018). We wanted to acquire a deeper understanding about vocational student competencies from the relatively understudied perspective of vocational teachers. Semi-structured, qualitative in-depth interviews provided an appropriate method for data collection. They allow the interviewees to react to the interviewer's questions relatively freely, conveying various experiences and meanings, also spontaneous viewpoints, while the uniform structure and themes of interviews ensure that all relevant topics are addressed with all interviewees (Brinkmann & Kvale, 2018).

Using background theories associated with the research questions, 13 interview questions were created, encompassing one orientation question and two broad themes: I) The demands of working life from the IVET graduates and II) Teacher roles, tasks and working-life connections. To avoid academic terms in the interview questions, the term 'competency' was replaced with 'readiness', which is its closest Finnish equivalent (cf. Löfgren et al., 2020). Last, a separate form was composed to collect background information, such as age, teaching experience and trade-specific job experience.

In May 2018, the first two pilot interviews were conducted; the first one was excluded from the final data. The second pilot interview was full-length and included. Based on the pilot interviews and the suggestions of interviewees, minor alterations to some questions and their order were made. In autumn 2018, the first author interviewed eleven other teachers. The length of interviews spanned from 60 to 120 minutes. All interviews were recorded and the first author transcribed them verbatim. The research data consist of 168 sheets of interview transcriptions from 12 vocational teachers.

Analysis

Qualitative content analysis was used to compress the data into a conceptual structure (Elo & Kyngäs, 2008; Schreier, 2012). Instead of sheer induction or deduction, qualitative content analysis was applied abductively. Iteration between data and theory helped to improve inference, scrutinise anomalies and find the most likely explanations for the data (Timmermans & Tavory, 2012).

The analysis was conducted with Atlas.ti 8 software. Interviewees' utterances were analysed as explicitly and semantically as possible, focusing on the content of their arguments (cf. Brinkmann & Kvale, 2018). A unit of analysis was a participant's expression implying one idea (Elo & Kyngäs, 2008); for instance, a single word, sentence or wider excerpt. Altogether 1,347 units were coded. The analysis comprised seven main dimensions, deriving from research questions (Schreier, 2012), under which the codes were allocated: competency expectations (RQ1.1); experiences on graduate competencies (RQ1.2); competencies as teaching contents (RQ1.3); instructional practices (RQ2); competencies learnt during workplace learning (RQ3.1) and conditions and teacher contributions for successful workplace learning (RQ3.2).

In the first part of analysis, the first author employed an existing conceptual categorisation for upper-secondary vocational graduate competency expectations used in a previous study (cf. Löfgren et al., 2020). Categorisation was applied with minor adjustments to deductively analyse competencies in this study (i.e., research questions 1.1–1.3 and 3.1); thus, juxtaposition of the current findings could be made with the previous ones. The authors later discussed and revised the competency categories. No major alterations were needed. The coding categories for competencies were as follows.

Domain-specific competencies encompass trade-specific substantial knowledge, manual skills and self-regulation (e.g., Gekara & Snell, 2018). Technological competency covers students' pre-study proficiency for technical trades, such as knowledge of technological concepts and manual dexterity (Autio, 2011). Professional self-perception embodies how students evaluate themselves as individuals and co-workers (Van Houtte et al., 2012). Work-related attitudes enable students to advance the cohesion and performance of their future communities of practice (e.g., Löfgren et al., 2020; Nägele & Stalder, 2017). Social competency encompasses correct, clear and courteous interaction with others (Löfgren et al., 2020; Vähäsantanen & Hämäläinen, 2018). Motivation to work includes students' willingness to work in general and interest in a specific trade and its job tasks (e.g., Pylväs et al., 2018). Learning competency covers motivation and ability to learn, including metacognitive skills to plan, conduct and assess one's learning (e.g., Jossberger et al., 2010; Löfgren et al., 2020). In addition, there were three competency categories that emerged from the data (Schreier, 2012, p. 89). Mathematical competency entails basic arithmetic and algebraic calculation skills and three-dimensional and logical thinking. Language competency encompasses proficiency in both the mother tongue and foreign languages. ICT competency includes necessary skills to employ computer and mobile-device software.

In the second part of analysis, the first author analysed participants' expressions on instructional practices (i.e., RQ2) and conditions and teacher contributions for successful workplace learning (i.e., RQ3.2). These were analysed abduc-

tively to create new coding categories that would explain the data and be consistent with the theoretical background (Timmermans & Tavory, 2012). At the beginning, the first author inductively coded participants' expressions and categorised the codes with descriptive names imitating the participants' expressions (Schreier, 2012). Then, the first author pushed these descriptive coding categories against the theoretical background to rearrange them into larger, consistent categories (Timmermans & Tavory, 2012). The authors discussed all categories and coding several times. Some coding categories were merged to create a more holistic conceptual structure. Finally, the subsequent coding categories emerged.

The coding categories for teachers' instructional practices (RQ2) were the following. Mission encompasses what teachers consider the purpose of their vocation (e.g., Berner, 2010; Köpsén, 2014). Fostering includes teachers' value-laden opinions on important pedagogic principles and student encounter, such as care and support, establishment of a learning atmosphere and student interaction (Köpsén, 2014). Professional development refers to teachers' interventions to advance students' professional growth (Berner, 2010; Köpsén, 2014). Scaffolding includes different didactical principles aimed to gradually increase student autonomy and decrease teacher supervision (e.g., De Bruijn & Leeman, 2011; Wood, Bruner & Ross, 1976). Deliberate practice refers to teacher-led and repetitive rehearsal of professional conduct, usually in authentic working environments (Jossberger et al., 2010).

Coding categories for conditions and teacher contributions for successful workplace learning (RQ3.2) were the following. Applicant screening describes workplace learning as a long-term recruiting process (Löfgren et al., 2020). Workplace heterogeneity refers to employers' various incentives to offer high quality workplace learning (e.g., Isopahkala-Bouret, 2010; Vähäsantanen & Hämäläinen, 2018). Coaching refers to teachers' efforts to train their students for workplace-learning (WPL) periods and selection of those students who may proceed to WPL (Isopahkala-Bouret, 2010; Mårtensson et al., 2019). Matching describes how teachers network with employers, plan apprenticeships with them and promote their students to employers so that both the employers and the students find their best counterpart (Mårtensson et al., 2019; Vähäsantanen et al., 2009). Assessment covers teachers' formative and summative assessment during WPL (Isopahkala-Bouret, 2010; Mårtensson et al., 2019). Teacher development portrays how teachers themselves may develop alongside the WPL supervision (Vähäsantanen et al., 2009; Vähäsantanen & Hämäläinen, 2018).

Results

The results reflect the views of research participants as unequivocally as possible and are presented following the order of the research questions. However, the results related to the first research question and its sub-questions (see Table 1)

are presented thematically, one competency domain at a time, to improve their comprehensibility. To elevate results transparency and to depict themes that participants addressed most, participant counts and coding frequencies are provided in Tables 1, 2, and 3.

RQ1: Teachers' perceptions on IVET graduate competencies

As Table 1 shows, all participants expected that graduates show basic *domain-specific competencies* and they also address these in their instruction. Teachers considered it natural that the youth as novices hardly understand comprehensive work processes but only specific tasks. Teachers emphasised that students should take work safety issues more seriously because tools and equipment are dangerous. Several teachers further reported on adolescents' *technological competency*. Many incoming students have not used tools in their free time. Those who have, develop rapidly. Last, several teachers addressed adolescents' *professional self-perception*. They said that many seek their peers' approval, even at the expense of their studies. Slow learners may disrupt others or they become stressed and anxious.

As regards *work-related attitudes*, several participants expected students to be responsible; for example, they expected them to adhere to company rules and care for their duties. Some adolescents are not used to work and may neglect these. However, only a few teachers explicitly reported that they address responsibility issues in their teaching. Most teachers expected conscientious attendance. Timetables and mobile phones are a constant challenge with teenage students. Many teachers declared that they try to tackle these issues. Some even call specific students every morning to get them to school. Teachers further reported that they trigger adolescents' personal initiative by insisting that students apply for apprenticeships and instruct them to ask for extra work. Last, several teachers complimented adolescents on their physical health. Many are sober and smoke-free. Unfortunately, some may use narcotics instead.

Many teachers addressed adolescents' *social competency*. They especially reported on their experiences of youth showing respect for others. They behave themselves politely and empathetically in principle but some litter or drift easily into quarrels. Some teachers reported that they also teach students basic manners. Teachers further expected communication and collaboration skills of students but only a couple mentioned that they teach students to collaborate, especially to consider other people and to give and ask for help.

Most participants experienced that adolescents are heterogeneously *motivated to work*, depending on the vocational field. Teachers from electrical and automation engineering appreciated students' motivation. Teachers from metalwork and machinery complained about the opposite. Thus, variation in student motivation may have its roots in the general reputation of vocational trades. Metal-

work lacks marketing and recognition; therefore, adolescents may ignore it. Several teachers tried to motivate their students to work, presented career opportunities and organised excursions to workplaces.

Table 1. Frequencies of categories related to teachers' competency perceptions (RQ1).

	RQ1.1 Expectations		RQ1.2 Experiences		RQ1.3 Teaching contents	
Competencies	%	f/N	%	f/N	%	f/N
Domain-specific competencies	**59**	**122/10**	**5**	**16/8**	**40**	**101/12**
Technological competency	-	-	**3**	**10/6**	-	-
Professional self-perception	-	-	**5**	**17/8**	-	-
Work-related attitudes	**14**	**29/9**	**12**	**36/10**	**10**	**25/9**
Responsibility	5	10/8	2	5/4	2	6/4
Conscientious attendance	6	13/9	6	18/9	4	9/6
Personal initiative	2	5/3	2	5/3	4	9/7
Maintenance of physical health	0	1/1	3	8/6	0	1/1
Social competency	**10**	**21/8**	**3**	**10/8**	**4**	**11/5**
Respect for others	1	3/3	2	7/7	3	7/5
Communication	4	8/5	0	1/1	-	-
Collaboration	5	10/5	1	2/2	2	4/2
Motivation to work	**3**	**7/4**	**9**	**27/9**	**4**	**11/6**
Learning competency	**8**	**16/7**	**49**	**153/12**	**39**	**98/12**
Motivation to learn	7	14/7	15	47/10	12	30/8
Ability to learn	1	2/2	34	106/11	27	68/12
Mathematical competency	**4**	**9/5**	**7**	**22/10**	**2**	**6/5**
Language competency	-	-	**4**	**14/6**	-	-
ICT competency	**1**	**2/1**	**2**	**7/6**	-	-
TOTAL	**100.00**	**206**	**100.00**	**312**	**100.00**	**252**

Note. f=frequency of analysis units. N=number of participants raising the issue (max. 12).
- = data not obtained.

Many participants expected the students to show *learning competency*. One teacher highlighted studies as 'a start and after ten years of learning at work you may comprehend one part of this trade'. Most teachers considered that students' motivation to learn varies a lot. Others 'could not care less', especially about mother tongue and mathematics. Others aspire for studies within higher education. A few teachers stated that some problems derive from primary-school instruction. Students are not required to do enough; thus, they learn to underachieve. Several participants declared that they try to trigger students' intrinsic motivation. Teachers plan interesting lessons, consider students' own ideas and keep up high expectations for learning results. They underlined extrinsic motivation as well. 'You must sit next to some students if you want them to study',

stated one teacher. He added that some teachers neglect teaching morale and 'let anyone pass without insisting on learning results'. Another teacher concurred but described a systemic problem:

> There are not real sanctions for absence or anything. Students get one chance after another … This destroys students' self-initiative and responsibility. Teachers, in turn, must do much work in vain, only to enable further skipping.

Most teachers considered students' ability to learn heterogeneous. Attention deficit disorders are common but some incoming students lack even the basic learning skills and strategies; for instance, they are not used to having pens and notebooks at school, taking notes and studying for exams. Accordingly, many teachers doubted students' ability for self-directed learning. A few students can choose useful courses themselves, set achievable learning goals and adhere to them responsibly; many others cannot.

All teachers recognised that their job includes improving students' ability to learn but many opposed self-directed learning. A couple of participants indicated that reluctant teachers may have a negative pedagogical attitude. One teacher noted: 'Teachers think that students just come to the workshop and work. Not at all! We must plan their assignments carefully'. Another added: 'We must talk a lot with students, consider their views and recommend courses for them'. The same teacher also called for a sense of proportion: 'Teachers may use their own reasoning. We have implemented individualisation to a reasonable extent. For example, we still create schedules for our students'.

Most teachers were concerned about incoming students' *mathematical competency* and the quality of primary-school teaching. Many students struggle with three-dimensional thinking and basic arithmetic and algebraic calculations. Some teachers added that they teach mathematical competency. One teacher had developed some basic pencil-and-paper-style calculation exercises but commonly teachers integrated mathematics in everyday activities. For example, students measure and cut pipes, cables and other material. Several participants further addressed *language competency*, because they observed some students struggle to understand what they read. They can hardly read manuals from cover to cover and cannot use a table of contents. Teachers considered deficiencies in literacy and numeracy to not only hamper and slow studies but also jeopardise graduation, coping with daily work and access to further education. In turn, some teachers reported on their positive experiences on adolescents' *ICT competency*. Students competently use different devices and applications and seek information on the internet.

To sum up, all teachers reported that they expect their students to develop basic-level domain-specific competencies during the IVET studies. Teachers train domain-specific competencies but do not require perfection from novice graduates. Every teacher also widely addressed students' needs and challenges in

learning competency. Many students struggle with self-directed learning skills and lack even the basic learning strategies. Students similarly fall behind with their competencies in language competency and mathematics. Already incoming students face these challenges; therefore, teachers reproached primary school teaching for not demanding enough from the students. Many students also lack an initial motivation to learn and need a lot of extrinsic teacher support for their motivation. Similarly, many students lack a motivation to work. However, there were differences between the vocational trades: teachers of electrical and automation engineering commonly appreciated students' motivation while teachers of metalwork and machinery did the opposite. A couple of teachers highlighted that teachers differ in terms of their pedagogical attitude, which may partly affect their utterances.

RQ2: Teachers' preferred teaching contents and methods

Results on teachers' teaching contents and methods are specified in Table 2. All teachers highlighted that their ultimate *mission* as a teacher is to educate employable professionals with a sense of pride. Some teachers also valued the will for lifelong learning and highlighted studies as a part of a good life.

All teachers addressed *fostering*. Most teachers reported taking care of their students. They represent an example of a 'safe adult' and regularly discuss with students. Some teachers embraced this task, while others would rather focus on professional development. Further, most teachers highlighted empathy. They help students with heartaches and understand their immaturity and interests besides school, such as dating and hobbies. Teachers also encourage students giving them constructive feedback and arranging opportunities for them to experience success in learning. Several teachers added that by showing their own enthusiasm to teach they try to engage students in learning. However, one teacher criticised that saying, 'Teachers should believe more in pedagogy and its effect on learning. Many teachers talk negatively about students, complaining that they are what they are and won't develop'. Last, most teachers try to create a safe atmosphere through discipline, common rules and equality. Thus, teachers may acquire students' trust and enable learning.

Most teachers addressed *professional development*. Several teachers said they instruct domain-specific competencies through their own professional example. Teachers also talk about their trades in a respectful way. Teachers coach students to workplace reality by relating incidents from their own job experience. Some teachers redirect the unmotivated students to other vocational trades if they cannot learn even with special-education interventions.

Table 2. Frequencies of categories related to teachers' instructional practices (RQ2).

Instructional practices	%	f/N
Mission	15	42/12
Professionalism	12	33/12
Lifelong learning	1	4/2
Good life	2	5/5
Fostering	35	100/12
Care	6	17/9
Empathy	7	21/9
Encouragement	6	17/10
Enthusiasm to teach	6	17/6
Safe atmosphere	10	28/10
Professional development	13	36/9
Own example	5	15/7
Relating incidents	3	9/7
Redirecting the unmotivated	4	12/4
Scaffolding	22	62/12
Gradually increased difficulty	9	25/12
Differentiation	7	19/8
Visualisation	4	12/3
Reflection	2	6/4
Deliberate practice	15	44/12
TOTAL	100.00	284

Note. f = frequency of analysis units.
N = number of participants raising the issue (max. 12).

All teachers reported that they plan and conduct lessons using different principles of *scaffolding* (cf. Wood et al., 1976). They model assembly techniques, supervise students, adhere to safety issues and gradually increase difficulty. Ultimately, advanced students are given independent tasks. Teachers also differentiate assignments and teaching methods. They visualise abstract and technical phenomena, for example, using a voltmeter. Some teachers conduct group reflection events to deepen students' learning.

Last, all participants instruct on professional proficiency through *deliberate practice*. Students gradually learn doing various exercises in the workshop. Teachers also debated whether the modern ICT-based teaching methods contribute to the learning of manual skills. However, one teacher noted that 'embracing new ways of teaching depends greatly on teachers' own attitudes'.

In sum, all teachers aimed to train their students into employable professionals. A few teachers also pointed out vocational studies as a means to aspire for

lifelong learning or a good life. As regards teachers' instructional practices, all teachers described about various forms of fostering. They show care and empathy to their students, encourage them with positive feedback and own enthusiasm and try to create a safe atmosphere where everyone respects common rules and equality. However, teachers' adherence to pedagogy or belief in students' potential may vary. Most teachers also addressed students' professional development. Teachers reported to teach through their own professional example and by grounding their viewpoints to past incidents in their professional careers. Teachers commonly instruct their students in a workshop where their students learn to do professional assignments through deliberate practice. Adhering to the principles of scaffolding, teachers gradually increase assignment difficulty and reduce guidance for students.

RQ3: How workplace learning may affect students' learning

In Table 3 we present the results of the third research question and its sub-questions. Subsequently, we introduce the results in more detail following the order of sub-questions.

Competencies developed during workplace learning

All participants considered workplace learning (WPL) positive for students' development in *domain-specific competencies*. During WPL, students learn self-regulative knowledge to sequence tasks and comprehend work processes. Students also learn procedural knowledge to use tools and assembly skills. However, teachers emphasised school as 'a better place to learn theory' and other declarative knowledge.

Some teachers considered that students mature during WPL. Working with adults helps them to develop positive *professional self-perception*. Teachers also highlighted *work-related attitudes*. Students learn responsibility through workplace rules and experience 'what is it like to be at work'. Some teachers debated conscientious attendance. Positively, when students continue studies at school after WPL they adhere better to timetables. Some participants further addressed *social competency*. At the workplace, adolescents improve their ability to communicate with other people and collaborate in teams. One teacher added that gaining membership in a work community is 'quite a job for the youth' but an important task.

A few participants stressed WPL as an effective way to acquire *motivation to work*. One teacher stated that some students like even monotonous tasks because they may work independently. However, some students expect more: 'Sometimes students prefer to change the workplace, which is good. During their studies, they may try different jobs and employers and find a position they enjoy'. Last, some participants addressed *learning competency* and mentioned that WPL develops motivation to learn. School-weary students may get a clean start. As

put by one metalwork teacher: 'Here at school we almost felt that nothing helps but after the apprenticeship the employer praised the student to the skies!' High achievers, in turn, do not become frustrated because they may proceed quickly.

Table 3. Frequencies of categories related to teachers' perceptions on workplace learning (RQ3).

	%	f/N
RQ3.1 Competencies		
Domain-specific competencies	67	59/12
Professional self-perception	5	4/3
Work-related attitudes	8	7/5
Responsibility	2	2/2
Conscientious attendance	6	5/4
Social competency	8	7/4
Communication	3	3/2
Collaboration	5	4/3
Motivation to work	6	5/4
Learning competency	7	6/3
Motivation to learn	7	6/3
TOTAL	**100**	**88**
RQ3.2 Conditions		
Applicant screening	**14**	**28/12**
Workplace heterogeneity	**24**	**49/10**
Coaching	**12**	**24/9**
Matching	**23**	**48/10**
Networking with employers	8	17/8
Planning of apprenticeships	4	9/4
Promoting students	11	22/7
Assessment	**11**	**23/7**
Teacher development	**16**	**33/9**
TOTAL	**100**	**205**

Note. f = frequency of analysis units.
N = number of participants raising the issue (max. 12).

Conditions and teacher contributions for successful workplace learning
According to all participants, the best part of workplace learning (WPL) is *applicant screening*. Employers assess potential employees and students have a chance to show their skills. Many graduates are hired by their former apprenticeship organisations. However, not all the results of WPL are positive; some teachers also criticised *workplace heterogeneity*. Every firm cannot offer versatile tasks because they operate on a specialised niche or lack equipment. Moreover, employers' commitment varies. Some teach any apprentice but some only teach potential

employees. Many employers cannot provide enough guidance either because they lack personnel suitable for mentoring or have too much work already. Consequently, employers assign only simple, repetitive tasks, or take apprentices to ease their own burden. Teachers deemed that schools, on the other hand, offer versatile learning environments for everyone.

Teachers continued reporting how they contribute to students' WPL. Teachers reported that they *coach* students for apprenticeships. They develop students' competencies and select those ready for WPL. Teachers *match* potential students and employers. Matching involves networking with employers during supervision of students' apprenticeships and mutual planning of apprenticeships. Teachers promote students to those employers who offer decent working conditions, quality mentoring and opportunities for future employment. Teachers also know which workplaces are to be avoided because they do not offer decent working conditions.

Many teachers reported that WPL encompasses various *assessment* tasks. Teachers visit workplaces and supervise apprentices. Afterwards, teachers hold summative debriefing sessions with the employer and the apprentice. Most teachers emphasised that supervision creates potential for *teacher development*. While teachers receive feedback about apprentices and their learning, they may fine-tune their own teaching. Teachers also learn about new equipment and sometimes receive invitations to employers' in-house trainings; car mechanics can often take advantage of such training. Teachers may also carry out a WPL period themselves.

To summarise, all participants considered WPL relatively positive for student learning of competencies. During their WPL periods, students may advance their domain-specific competencies and develop a more positive professional self-perception. Students mature in many other ways as well. Workplace rules and conventions enhance students' work-related attitudes, for example responsibility and conscientious attendance. Interaction with senior professional workmates helps students to further their communication and collaboration competencies. Learning by doing real-life job assignments, students may acquire a stronger motivation to work and learn. At its best, a successful WPL period may yield a job offer for the student. However, according to the teachers workplaces are very heterogeneous in terms of their possibilities to offer high-quality WPL conditions. Therefore, teachers need to know to which firms they may send their students for WPL periods. In addition, a successful WPL period requires that teachers coach their students to the workplace realities and plan apprenticeships together with the workplace supervisors.

Discussion and conclusions

Methodological reflections

To ensure its credibility, this qualitative interview study was carefully conducted in an accountable and visible manner (Anfara et al., 2002). Research questions were based on existing research needs, as articulated in the preceding literature. The research participants represented experienced vocational teachers; thus, the richest possible data could be collected (Brinkmann & Kvale, 2018; Elo & Kyngäs, 2008). Being ordinary vocational teachers in an ordinary vocational school, the research participants' arguments may also represent general teacher views to some extent (cf. Brinkmann & Kvale, 2018). Semi-structured interviews allowed to collect detailed data on participants' viewpoints and to develop a deeper understanding of the studied phenomenon; thus, the chosen data collection method was justified in terms of the study aim (Brinkmann & Kvale, 2018). The conducted twelve interviews also yielded saturated data (Brinkmann & Kvale, 2018). Ethical principles of researchers' university were considered through the research process; the anonymity and voluntariness of participants and unequivocal display of research results was ensured.

However, some features of the study limit the conclusions that can be drawn from the results. A disadvantage of the interview as a data collection method is that interviewee answers may be ambiguous, contradictory or seemingly irrelevant to the interview topics; thus, the interviewing researcher tried to pay as much attention as possible to these discontinuities, focused on what the interviewee explicitly said, what was 'said between the lines', and whenever necessary, posed clarifying questions (cf. Brinkmann & Kvale, 2018). Still, some discontinuities might have still remained and affected the analysis. Further, the interviewed teachers represent only one ordinary Finnish vocational education provider and four different vocational programmes. Teachers' views were scrutinised in-depth to acquire a deep understanding (Brinkmann & Kvale, 2018) but these may only partially represent opinions of technical-trade teachers in other schools. Teachers from other vocational trades might have also given different viewpoints. Consequently, generalisations to other schools and vocational fields should be made critically.

Results in light of previous research

Teachers' perceptions on competencies
Our findings clearly imply that teachers consider domain-specific competencies as the core of vocational education. Graduates should understand basic knowledge on work-safety issues, materials and tools broadly enough to become employable. This result is consonant with earlier studies (e.g., Berner, 2010; Köpsén, 2014) but also with our previous findings on employer views on graduate

competencies (Löfgren et al., 2020). Teachers' standpoint also reflects a more general, workplace-driven, occupationalistic standpoint to IVET student competency needs which seems to be the main paradigm in the Finnish IVET (Mulder, 2014; Isopahkala-Bouret, 2010; Rintala et al., 2018). Teachers further revealed that graduates achieve domain-specific competencies heterogeneously due to lack of job experience. Employers share this view and do not expect perfection of graduates (Löfgren et al., 2020).

In comparison to employer views (see Löfgren et al., 2020), the greatest difference in competency expectations seems to be that teachers favoured more mathematical and language competencies to enable further education. The teachers reported that some students struggle even with basic mathematics, have problems understanding what they read and severely question the need to cultivate their competencies in mother tongue and mathematics. Students may still succeed at manual work; thus, employers might not have highlighted these deficiencies (Löfgren et al., 2020). At the same time, the industry may adhere only to their immediate competency needs (Mulder, 2014). There is also a more gene-ral tradition of undervaluation of general disciplines within technical vocational trainings (cf. Bakker & Akkerman, 2019; Niemi & Rosvall, 2013). Consequently, in line with Mulder (2014), we suggest that all vocational teachers should embrace their pivotal role as protagonists of general disciplines because these will further students' prospects in their lives in general.

In addition, teachers in this study expressed a deeper apprehension about the status and future of IVET. Teachers especially debated adolescents' learning competency and incoming students' common lack of motivation to learn. Most teachers further stated that the youth struggle with their ability to learn and especially with self-directed learning: students can hardly set attainable learning aims and steer their learning (see also De Bruijn & Leeman, 2011). Consonant with Vähäsantanen and Hämäläinen (2018), teachers in our study expressed that they must attempt to fill gaps in students' primary school education, in such areas as basic mathematics, good manners, timetables and responsibility. In our previous study, technical-trade employers recognised similar IVET apprentice shortcomings (Löfgren et al., 2020).

However, some teachers stated that student self-direction might evolve if teachers themselves developed their own attitudes and instruction. Teachers' attitudes might stem from a dominant craftsperson habitus (Berner, 2010) or insufficient teacher studies (Köpsén, 2014; Nylund & Gudmundson, 2017). Moreover, the results revealed a systemic problem: indifferent students do not risk disqualification. In fact, Rintala et al. (2018) found that the modern graduation-rate-based model of state funding may induce education providers to let students graduate without having passed all the tests. Consequently, we argue that some

technical-trade teachers' reluctance towards pedagogy may have both individual- and system-level characteristics. Future research should examine these patterns in-depth to find out ways to develop vocational teaching.

Teachers' instructional practices
Consonant with earlier research (Berner, 2010; Isopahkala-Bouret, 2010; Vähäsantanen & Hämäläinen, 2018), all participants highlighted professional proficiency as the key aim of teaching. A few mentioned lifelong learning or living a good life, which implies that the teachers seem to have adopted a relatively occupationalistic view to competencies (cf. Mulder, 2014). However, all teachers described their everyday teaching practices as quite the opposite: they foster more than teach professional competencies. All participants had a relatively uniform palette of teaching practices. They teach within deliberate practice, model trade-specific job tasks, support and supervise. As students learn, they gradually gain independence. This type of scaffolding is a tradition in technical-trade teaching (Berner, 2010). Most teachers further stated they differentiate their teaching and assignments but only a few mentioned other teaching methods, such as visualisation and reflection.

Again, some participants expressed that teachers themselves commonly stick to their 'old habits' and question the need for pedagogical competency (e.g., on self-directed learning) due to a negative attitude or lack of training. Earlier research confirms these teacher remarks (Berner, 2010; Nylund & Gudmundson, 2017). Berner (2010) states that a dominant craftsperson habitus incorporates a tenacious tradition of preferable training methods. In line with earlier research, we suggest that teachers would profit from up-to-date pedagogical competency in terms of decreased stress, better learning results and well-being at work (Köpsén, 2014, Nylund & Gudmundson, 2017). However, earlier Finnish studies (Rintala et al., 2018; Vähäsantanen & Hämäläinen, 2018) also highlight such teacher concerns as understaffing, excessive workload, lack of time and high pace of changes that may cause inertia. We suggest further research to discover causes behind vocational teacher inertia.

The effects of workplace learning on student learning
All teachers considered workplace learning beneficial for students' professional development. Students mature during their apprenticeships developing professional self-perception and work-related attitudes. Thus, as put by Bakker and Akkerman (2019), students cross the boundaries between school and workplace and transform from adolescents into young adults and novice professionals. Still, most teachers highlighted applicant screening as the greatest benefit of WPL. Employers may screen potential employees and students may become employed. This is in line with employer views (Löfgren et al., 2020). Moreover, teachers un-

derlined that workplaces provide very heterogeneous conditions and assignments for students (see Isopahkala-Bouret, 2010, and Pylväs et al., 2018, for similar results). Our results enrich the existing theoretical discussion by highlighting some causes for this heterogeneity. First, employers may have specialised themselves heavily. Second, they may lack commitment for student development and use apprentices only as a source of cheap labour (cf. Isopahkala-Bouret, 2010; Mårtensson et al., 2019). Third, they may not provide enough guidance due to their hectic work pace.

Further, our results highlight teachers as gatekeepers on a boundary from school to work. In line with earlier research (e.g., Berner, 2010; Köpsén, 2014; Mårtensson et al., 2019), we found that teachers train students for apprenticeships by developing their domain-specific competencies and coaching them about working life requirements. Teachers use their stakeholder networks, match students with potential employers; thus, they arrange for them opportunities to enter the world of work.

At the same time, our results uniquely emphasise teachers as students' 'attorneys'. Teachers safeguard students from unethical employers and actively recruit upright apprenticeship providers who offer students proper learning opportunities. Interestingly, these findings seem to indicate teachers' mistrust towards some employers. Similarly, Vähäsantanen et al. (2009) found that some employers question vocational teachers' domain-specific expertise.

We believe that the development of trust is interwoven in the practices of boundary crossing. When teachers and employers organise and coordinate students' WPL periods and teachers attend employers' in-house trainings, they may identify each other's strengths and roles; thus, they may also learn to appreciate each other's competence (Bakker & Akkerman, 2019). Therefore, we suggest that the boundary zone between school and work should not be considered only as an area of (student) development and transition (cf. Berner, 2010; Köpsén, 2014; Mårtensson et al., 2019), but also as a collaborative environment to create trust. Thus, students may experience high-quality workplace learning, employers may acquire competent future employees and teachers may consolidate their position as gatekeepers to work. Now that workplace learning plays a greater role in modern European vocational education (Jossberger et al., 2010; Rintala et al., 2018), it is paramount to further study how boundary processes contribute not only to students' development but also to that of teachers and employer organisations.

Practical implications and conclusions

This study has scrutinised a scarcely studied teacher-level viewpoint on IVET graduate competency needs and instructional preferences. First, the results strongly emphasised that most teachers share a uniform view with stakeholder employers (Löfgren et al., 2020) on graduate competency needs. Graduating students need to understand elementary domain-specific competencies to be able to

start in professional work. At the same time, graduates cannot have broad job experience; therefore, they distinguish themselves with domain-general competencies in recruitment. Teachers also recognise students' strengths and weaknesses relatively unanimously with employers. Students are very heterogeneous. Many suffer from learning and motivational disabilities and lack of work-related attitudes and social competency. Students' challenges may initially stem from deficient primary school teaching and this calls for further research.

Secondly, our results implied that the studied technical vocational teachers considered themselves primarily as craftspersons and mediators of domain-specific competencies. Most of them also adhered to a fairly traditional 'master-apprentice' way of teaching through deliberate practice. At the same time, most teachers recognised the need for student fostering (in domain-general competencies) but were more or less reluctant to embrace this task. In fact, some technical-trade vocational teachers may not intervene in students' challenges because they lack pedagogical knowledge on such topics as self-directed learning and reflection. Up-to-date pedagogical knowledge could help teachers tackle students' challenges and relieve their own stress. Furthermore, modern employers expect workers to engage in self-directed work and have self-initiative; thus, teachers must be able to address these qualities and skills in their instruction. Hence, we recommend supplementary pedagogical training for teachers and suggest further research on how vocational teachers may guide students' self-directed learning.

Last, our results indicated that teachers consider workplace learning mostly positive for student learning of competencies. At the workplace, students mature and may develop a deeper understanding, for example, about state-of-the-art tools, assembly techniques and materials. School-weary students get a second chance to show their skills and high-achievers get sufficiently demanding challenges. Every student may also get 'a foot in the door' and aspire for future employment. However, our results uniquely highlighted vocational teachers as 'attorneys' who protect students' rights for equal learning opportunities, especially in apprenticeships. If workplace learning is excessively emphasised and teaching at school is cut to the minimum, we believe there is a risk that apprenticeships and personal connections become the sole recruiting factors for graduates. Thus, the status of vocational education and the diploma will deteriorate. This would hardly affect motivated students but could make labour market entry even more difficult for the weak and initially unmotivated students. To safeguard equal learning for everyone, we argue that skilful teachers are still needed.

Declaration of interest statement

No potential conflict of interest was reported by the authors.

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