

ISSN: 2464-4153

Vol 4, No 1 (2019), pp. 53 - 80

https://doi.org/10.7577/sjvd.3218

Teaching and Teaching Practice in Vocational Teacher Education:

Vocational Student Teachers' and Practice Teachers'

Perspectives on Teacher Education for and in Teaching Practice

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Abstract

This article addresses a study of postgraduate vocational student teachers' and school-based practice teachers' views of teacher education's relevance for and in first teaching practice. There is limited knowledge of what the practice field sees as relevant in the vocational student teachers' teaching practice. Thus, this article aims to fill some of this research gap. The research questions guiding this article are as follows:

- What aspects of their education do vocational student teachers perceive relevant for and in teaching practice?
- How does the vocational student teachers' understanding equate with the practice teachers' views?

The data was collected using a questionnaire, semi-structured interviews and focus group interviews, and represent both vocational student teachers' and practice teachers' views. A systematic literature search was also conducted. Our findings show that vocational student teachers' perception of what is relevant in teaching practice differs in some ways from what the practice teachers say. The results also indicate, differences in the practice of vocational didactics, that the practice teachers' and the vocational student teachers' experience

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challenges in mentoring and that the practice teachers need and want more support. Based on our findings, we will argue that there is an urgent need to establish a more formal dialogue between the university and the practice field on curriculum content, practice guidelines, the role and status of the practice teacher on a personal as well as on an organisational level.

Keywords: Vocational teachers, teacher training, vocational didactics, coherence

Introduction

One of the university's primary goals is to educate highly qualified professionals, with solid professional skills and expertise. To ensure relevance, it is essential that the universities cooperate closely with the practical field. This cooperation is stipulated in the Norwegian National Curriculum Framework for Vocational Teacher Education, where it is stated that teacher education should be a two-way collaboration between the university and the practical field (Kunnskapsdepartementet, 2013).

The National Curriculum Guidelines for Post Graduate Vocational Teacher Education also emphasises the correlation between practice and theory and that a focus on work-subjects should be central in the study programmes (Nasjonalt råd for lærerutdanning, 2014).

However, earlier evaluations of Norwegian teacher education have documented a lack of coherence (Nasjonalt organ for kvalitet i utdanning, 2006, 2013). National and international studies support that coherence is an on-going challenge between teacher education and the practical areas (Canrinus, Bergem, Klette & Hammerness, 2015; Darling-Hammond, 2006, 2010; Heggen & Terum, 2013; Heggen, Smeby & Vågan, 2015; Hiim, 2015, 2017; Sylte, 2015, 2017; Zeichner, 2002, 2010).

To enable a comprehensive approach in our teacher education, core functions and activities for vocational teachers dominate (Syverstad & Nymark, 2016). The general approach is practical, student centred and consistent with a social-constructivist view of learning (Dewey, 1916, 1933; Schön, 1983, 1987; Vygotsky, 1980). A central aspect is that vocational student

teachers learn to teach job relevance in vocational education and training programmes (VET programmes) (Kunnskapsdepartementet, 2015).

Central to this approach is that the core of the student teachers' teaching should have a vocational didactical approach, based on a didactical relational model and with an emphasis on didactical analysis. Researchers in this field have described this as an approach where the job-functions are the bases for the learning and analysis (Hiim & Hippe, 2001, p. 31; Haaland-Sund, 2005, p. 23; Sannerud, 2005, p. 211). The success of our study course depends on the extent to which educational theory and practice are integrated on campus and in the 60 days of teaching practice if it is to be useful in developing the vocational student teachers' teaching competence.

While the vocational student teachers are in teaching practice, they are visited by their university teacher for a visit of approximately four hours. The visit includes observation of the student teachers' teaching and pre and post teaching mentoring. However, our observations during school visits indicated a limited focus on vocational didactics in several of the student teachers' teaching. Lack of work relevance in teaching vocational subjects in schools is a problem internationally as well as in Norway (Dahlback, Hansen, Haaland & Sylte, 2011; Hiim, 2013, 2017; Inglar, 2011, 2015; OECD, 2010, 2012; Ofsted, 2017; Young, 2000; UNESCO, 2012).

At the same time, the research of Clarke, Triggs & Nielsen (2013) and Zeichner (2010) found that there are challenges in teaching practice as there are differences in how some practice teachers interpret its aims and content. These aspects have implications for vocational student teachers' learning in teaching practice and coherence for the study course.

With this as a background, we were interested in finding out more about what was happening during teaching practice. There is limited knowledge about what the practice field sees as relevant in the vocational student teachers first teaching practice. Thus, this article aims to fill some of this research gap and contribute to the ongoing debate on coherence. The research questions guiding this article are:

 What aspects of their education do vocational student teachers perceive relevant for and in teaching practice? How does the vocational student teachers' understanding equate with the practice teachers' views?

Background

That fragmentation is characteristic of learning in many professional studies, not least in teacher education, is a central and ongoing issue. The work of Billet (2014), Eraut (2004), and Hiim (2013) give support to these concerns, and that lack of comprehensive understanding between practice and pedagogical theory is prevalent in professional courses. Further, they indicate that professional vocational education needs to have relevance to the field of work. Other researchers support this and conclude that the field is particularly challenged by its lack of coherence in the teaching between universities and the practice field (Darling-Hammond, 2006, 2010; Grande, Lyckander, Landro & Rokkones, 2014; Hiim, 2015, 2016, 2017).

In their international study, Canrinus et al. (2015) address the question of coherence between teaching on campus and teaching practice in schools. Their study shows that in precise efforts to connect theory and practice the student teachers reported more coherence. The research concludes that there is a need for tighter links between study courses and practical placements and that there remain challenges for teacher education.

Heggen et al. (2015) address coherence in professions as relationships between different types of knowledge, but also interconnections between pieces of knowledge developed and used in different contexts. Further, they distinguish between three types of coherence: biographical (meaningful connections to previous knowledge and experiences), and transformation (abilities transferred from education to work as a newly qualified professional) and programme coherence. Programme coherence is explained as: "Focuses on how students (in colleges) experience the relationships amongst the different elements of the curriculum and on the connections between in-class education and placement experience" (Heggen et al. 2015, p. 80).

In their study, Heggen & Terum (2013) relate the concept of coherence to student teachers' experiences and expressions of relevance. They measure this through four kinds of interactions: theory-practice, teacher-student, peer and practice supervisor-student interaction. They indicate further that coherence emphasising theory-practice, peer, and practice-supervisor-student interaction has a significant impact on professional identity.

Central to coherence in vocational teaching studies is that the vocational student teacher develops competence in teaching vocational knowledge and skills in different contexts. This is supported by abundant studies on the need for vocational teachers to be competent in teaching a spectrum of vocational skills and preparing their students for their chosen careers (Bødtker-Lund, Hansen, Haaland, Vagle, 2017; Dahlback et al., 2011; Inglar, 2011, 2015; Hiim, 2015, 2017; OECD, 2010, 2012; UNESCO, 2012).

However, the vocational teachers' role is diverse and complex, as Aspøy, Skinnarland & Tønder (2017) emphasise in their study. As well as the need for good vocational competence, their respondents say that the ability to motivate, engage, to have good classroom leadership, and updated digital and technological knowledge and skills are all important.

Studies conducted by Aamodt, Carlsten, Caspersen, Grøgaard & Røsdal (2016) point to challenges for vocational teachers. They indicate that today's students make larger and other demands than before and that many vocational teachers face a heterogeneous student group with students who are academically weak and are struggling with motivation or behavioural problems. The changing role of the teacher is supported by Lloyd & Payne (2012) in their comparative study of Norway, England and Wales in that increased emphasis on dropouts has changed the vocational teachers' role into that of a social worker. Young (2000) also gives support to these findings in his transnational study, which shows that, in part, there is a low motivation among students in VET programmes; while employers believe that, when qualified, the students lack knowledge and skills. Young's findings, supported by Broad (2016), also point to an attitude that vocational education and training generally has low status.

Learning in teaching practice

Hiim & Hippe (2006) argue that there may be contradictions between the practice teachers' and the university teachers' view of the content in teaching practice, leading to lack of coherence. Other research shows that practice teachers are uncertain about what is expected of them and that the content in teaching practice is often left up to them to decide (Darling-Hammond, 2010; Graham, 2006).

Clarke et al. (2013) address the practice teachers' double practice as a teacher of teachers, but also as a teacher of students. Their findings indicate that their students are the practice

teachers' main focus, and this can have consequences for what the student teacher learns in teaching practice.

Hiim & Hippe's (2006) report on an evaluation of teaching strategies that found that student teachers perceive practice teachers with mentoring abilities as contributing more to their learning. These practice teachers commented much more on the student teachers' teaching plans, and the student teachers developed a better understanding of pedagogical theory and the didactic relationship model. Other vocational student teachers in the same study stated that practice teachers without mentoring education gave the impression that the use of didactic relationship model was a waste of time (Hiim & Hippe, 2006, pp.79-81).

Further studies show that a lack of mentoring education is a global and unresolved challenge, and that practice teachers are selected for the role at random (Darling-Hammond, 2010; Zeichner, 2010). Today it is required that practice teachers in Norway have fifteen study credits in mentoring (Kunnskapsdepartementet, 2013), but under 20 % of them have acquired this.

According to Nilssen (2010), teacher education has become sceptical to the practice teacher being a role model who gives the "script" to the student teachers, in fear that they uncritically adopt the practice teachers approach. Skagen (2013) indicates that this has reduced the importance of the practice teachers' role and is therefore critical to them only being a discussion partner and not a role model.

Methodology and participants

The data in the study was collected using a questionnaire, semi-structured interviews and focus group interviews, and represent both vocational student teachers' and practice teachers' views. We invited our vocational student teachers from the same intake year and their practice teachers to participate voluntarily. All participants signed a consent form at the onset of the study.

As the study builds on a relatively low number of participants, there are limits to what general conclusions may be drawn on a larger scale. However, both the practice teachers and vocational student teachers represent six of the VET programmes in schools although some VET programmes had a higher representation than others.

One of the study's strengths is that the voices of the student teachers and their practice teachers are given weight. This helps to fill a knowledge gap and makes an important contribution towards understanding what is relevant and challenging in vocational student teachers' teaching practice as seen by those involved in it. Therefore, although the findings apply mainly to the sample used in this research, they may also contribute to the ongoing debate on relevance and coherence in teacher education.

Thirty practice teachers from VET programmes Health, Electrical, Media, Restaurant and food, Nature studies and Service and transport participated. The majority of the practice teachers had experience from mentoring vocational student teachers, but fifteen of the practice teachers had little or no experience within the last two years. Eight of the practice teachers had a Master's in vocational pedagogy. Two had Master's in their profession and three had mentoring education.

The sixty vocational student teacher participants were undertaking their first-year studies. Their vocational backgrounds were: 8 teacher students had Electrical background, 23 had Health, 12 had Media, 6 had Restaurant and food, 3 had Nature studies, and 8 had Service and transport. Fourteen of the student teachers had a Master's degree in their field. Eleven of the student teachers were employed as teachers in schools varying between one and nine months. The data from these eleven student teachers showed no significant difference from the other student teachers in the study.

QUESTIONNAIRE

All participants answered a questionnaire. The questionnaire was composed of closed questions based on a comparative scale from 1-6, where six is best or most important, and one is least good or of no importance. There was also room for open comments to each question (Patton, 2015). The questionnaires were anonymous, and they were conducted in March 2016. The practice teachers were sent the questionnaires using Lime Survey programme. The vocational student teachers answered the questionnaire in class on campus.

The questions were formulated to gain insight into teacher educational curriculum, vocational didactics, practical teaching, experience in students' placements, how and where vocational student teachers learn best to teach, what is most important to learn in teaching practice and roles.

SEMI-STRUCTURED INTERVIEWS

We conducted semi-structured individual interviews (Kvale & Brinkmann, 2009) with the practice teachers. The semi-structured interviews allowed us to focus on the participants' attitudes, perceptions, and experiences but also allowed either them or us to diverge or respond in more detail (Kvale & Brinkmann, 2009). Three main areas from the questionnaire were discussed. These were three areas where we wanted a deeper understanding of the practice teachers' attitudes and experiences (Barbour & Kitzinger, 1999). These three areas were: teaching practice as a learning arena in developing vocational teaching competence, challenges in teaching practice and vocational student teachers and practice teacher's roles. The interviews were conducted face to face and took place in the schools at an agreed time in spring 2016.

FOCUS GROUP INTERVIEWS

We conducted focus group interviews with 60 vocational student teachers to gain collective perceptions on teacher education and teaching practice. We arranged the groups, with 3-6 students in each, according to the vocational student teachers' professional backgrounds. We functioned as moderator and assistant moderator in the different groups (Barbour & Kitzinger, 1999).

We started each focus group interview by clarifying that questions and discussions in the focus groups were specifically to focus on experiences the vocational student teachers had from their first teaching practice and not from any other time or activities in schools. We encouraged dialogue between the participants, to ask each other questions and to comment on each other's experiences (Barbour & Kitzinger, 1999). The groups discussed the same three main areas used in the interviews with the practice teachers, as we wanted a deeper understanding of the vocational student teachers' attitudes and experiences (Barbour & Kitzinger, 1999).

Thirty minutes was allocated for each of the group's interviews. The interviews were conducted in the spring of 2016 at the university.

A systematic literature search was undertaken (Patton, 2015) which included the words coherence, practice teacher, teaching practice, vocational didactics, and vocational teacher education and training, in English and Norwegian in the database ERIC, Nordart and Oria. The search resulted in 29 books and 21 articles, 5 books and 13 articles are included in the

article. Colleagues have produced a good proportion of the literature used; this reflects our university's central role in the vocational teacher field over many years.

ANALYSIS

The quantitative data was analysed with the help of Lime Survey data programme. The focus of this article is mainly qualitative data. Comparison of the closed questions, the open comments from the questionnaire along with the transcribed and analysed interviews helped us to build a picture of what was happening in teaching practice. This resulted in sub-themes under each of the three main themes.

We chose an interpretive approach (Hatch, 2002). Emerging themes from the data collected were indexed by us independently of each other before the data was categorised, discussed and moderated in cooperation (Patton, 2015).

The empirical data is presented and discussed based on the two following empirical analysis categories:

- Developing an understanding of teaching and learning: *Observation, relevant activities and vocational didactics*
- Factors influencing relevant teaching practice: *Mentoring and the practice teacher's role.*

Findings

The results are presented around the main categories. To ensure clarity, first the practice teachers' perspectives are presented, then the vocational student teachers. Quotes are used to help illustrate and understand what we see as the main points.

The practice teachers' perspective: Developing an understanding of teaching and learning

The results from the questionnaire indicate that the practice teachers agree that what is most
important for the vocational student teachers to learn in their first teaching practice is
classroom leadership. This was confirmed in the interviews as the following four quotes from
practice teachers illustrate:

"Classroom leadership is most important for them (vocational student teachers) to experience, but this involves creating a good relationship with the students, who need to know who is in charge. When you have laid down the ground rules, as the year progresses you can loosen up a bit." (Practice teacher No. 1: Electrical)

"I tell the students (vocational student teachers) that you cannot teach them anything, if you do not have control, you must create clear boundaries. They like that; there are challenges; my network is social services, police and the health visitor." (Practice teacher No. 5: Health)

"Classroom control is most important; they (the vocational student teachers) need to have eyes in the back of their heads, half of them (students) have not chosen this as their first VET programme, difficult to motivate." (Practice teacher No. 20: Service and transport)

Another practice teacher meant that classroom leadership is important, but should be formed through good vocational teaching and that former work experience helps.

"Most of the students (vocational student teachers) have work experience where they have had to deal with other people, sometimes as leaders, they seem to fix classroom management, if you get the students working on a work-based project, then they are interested, maybe not all, but that is what is it is all about." (Practice teacher No. 18: Media)

These four quotes show two different attitudes to classroom leadership. We see in the first three quotes that the practice teachers were concerned with classroom leadership where discipline was central, the fourth with the vocational student teachers' leadership abilities and vocational teaching. The need for discipline was represented in all the vocational programmes the practice teachers represented, and there was agreement that these aspects were important for the vocational student teachers to learn. They connected this mostly to lack of motivation amongst the students for their VET programmes. However, the teachers in Health saw class leadership as most necessary for control in the classroom. That classroom leadership should be formed through good vocational teaching, and former work experience came mostly from practice teachers from Media, Restaurant and food, and Nature studies.

The second aspect the practice teachers said was relevant for the vocational student teachers' to learn was the students' programme curricula, as this decided what was to be taught. The

third most important aspect was effective and differentiated teaching methods along with assessment for learning.

All but three of the Health practice teachers indicated that vocational student teachers should quickly be familiar with the textbooks the students used, as this was as a good way to differentiate learning.

Another view put forward was that teaching is complex, and vocational student teachers needed to be told how to teach certain subjects. Practice teachers were concerned with what they called giving "tips" to vocational student teachers and how to teach and function as a teacher in the real world.

Observation in teaching practice

The practice teachers attitudes to the vocational student teachers observing them teaching varied. The majority said that this was important, but not always possible. However, seven of the practice teachers said it was better for the student teachers not to observe them, as this would end in the student teachers copying their methods. Five of the practice teachers said that two-teacher teaching was also a manner in which the vocational student teacher could observe them.

Vocational didactics in vocational teaching

All the practice teachers said that job-related teaching was important, and in the questionnaire, there was a question about the degree of vocational didactics included in the practice teachers' teaching. The scale ranged from 1 to 6, where 6 represents a very high degree of vocational didactics, and one is low. Twenty-two of the practice teachers gave themselves a score of 5, and eight gave themselves a score of 6. This indicates that all the 30 practice teachers meant they had a high or very high degree of vocational didactics in their teaching.

However, the practice teachers had different ideas about how vocational student teachers should teach vocationally and explained this in various ways. Some said that only practical teaching was necessary, others that theory was important to introduce practice. Others were concerned with job-related projects. The Health practice teachers said that job terminology and inter-subject focus is important for the student teacher to teach.

The practice teachers in Service and transport said that practical teaching was important for vocational student teachers to learn, but that they lacked specific teaching rooms and equipment. Eighteen of the practice teachers in Health also mentioned this as a challenge. All the practice teachers in Electricals said that there were challenges in practice due to health and safety aspects. In the other programmes, there was good access to workrooms or workrelated projects were conducted in relevant business outside the school.

The practice teachers used different terminology when talking about vocational didactics. These were: practical, workshop, workroom, inter-subject, or practice room teaching, job learning, work projects, and vocational options teaching.

The attitudes of the practice teachers differed on the importance of the vocational student teachers supervising the students in their practice placements. The main reasons given was that the student teachers needed classroom practice and to learn classroom leadership first. Ten said they did not think that supervising the students in practice placements counted as teaching practice hours and therefore did not practice it. Other practice teachers stated they encouraged these visits.

Factors influencing relevant teaching practice

All the practice teachers were concerned that learning to teach is complex, but that it is through teaching practice that the vocational student teacher becomes socialised into teaching in the real-life context and that mentoring was a crucial aspect of this. However, confidence in mentoring varied and practice teachers expressed challenges with their mentoring abilities and expectations from the university. These were associated with lack of time: the balance between teaching commitments and mentoring commitments: how often mentoring should take place and that expectations from the university were unclear. The practice teachers also said that due to time constraints, they always conducted after-lesson mentoring, but not always pre-lesson. The practice teachers also stated that providing emotional support through everyday communication is also important and part of mentoring.

The following three quotes from the practice teachers illustrate the dilemmas faced by them:

"I do not know how often I should mentor, I do not know how much the university expects, and the student (vocational student teacher) does not know.... I want to do it right." (Practice teacher No. 29: Nature studies)

"Mentoring and reflection are why the students (vocational student teachers) are here with me in practice. It is essential for their learning, but I often work overtime to get it done, after school, or sometimes in the lunch breaks." (Practice teacher No. 25: Restaurant and food)

"Mentoring is time-consuming, an extra role in a busy day." (Practice teacher No. 12: Health)

All the practice teachers said that reducing their teaching hours in the periods that they had vocational student teachers, would help with the mentoring dilemma. Some practice teachers said that reducing the vocational student teachers' teaching hours would also help. Time was a factor that all the practice teachers found challenging when they had student teachers. The majority also said that they felt they needed updated knowledge about teacher education.

Most of the practice teachers said that long teaching experience was important in their role, while a small number saw benefits of just having completed teacher education themselves.

All the practice teachers said that the role was interesting, exciting, worthwhile, and helped in their professional development. However, they also said that their role was undefined, isolated, lacked professional status and that selection of practice teachers was random. They experienced the little definition of their role from the university and that the practice guidelines for teaching practice gave little insight into what was expected of them or the teaching practice period. A few experienced role pressures, but they said it was difficult to define.

The vocational student teachers' perspective: Developing an understanding of teaching and learning

The majority of vocational student teachers wanted first and foremost to have an observation period of 3-4 days at the start of teaching practice. They wanted to observe different teachers' teaching methods and classroom management. They also wanted to reflect over the observed teaching with their practice teacher, to get teaching "tips" and obtain practical advice on classroom teaching and discuss the different decisions the practice teachers made and why. However, the student teachers experienced different approaches to observation: These quotes illustrate the different experiences the student teachers met:

"My practice teacher and I agreed that observing her was a good start; I learned a lot about the students from that. We talked about her teaching afterwards; then I wrote my log; it even helped me to understand more of the theory – well - in a way." (Vocational student teacher No. 33: Media)

"I met my practice teacher on Friday, and she told me the best way to learn to teach was to do it. She then told me I would be teaching on Monday, my first day, that was a big stress factor." (Vocational student teacher No. 15: Health)

Both these attitudes were experienced by the vocational student teachers and, although all of them did observe their practice teacher teaching, the length of time varied greatly. Only a few of the student teachers were able to reflect over the teaching with their practice teacher. Those who did said the practice teachers were very interested in vocational student teachers' assessment of their teaching.

Vocational didactics in vocational teaching

The vocational student teachers said the next most relevant activity for them was to plan and try out their job-related teaching ideas based on the students' job interests. However, the student teachers' experiences with vocational didactics in the school varied according to the vocational programme they were teaching on and offered a different view than the practice teachers. On a scale from 1-6, where 6 represents a very high degree of vocational didactics, and 1 is low, the student teachers in Media/communications and Restaurant and food gave their practice average grade of 5, in Nature studies it was 4.5, in Electrics it was 3.8, in Service/transport 3 and in Health the average was 1.5. This is illustrated in figure 1: Grade of work-related teaching in the practice teachers' teaching in different vocational programmes, according to the student teachers.

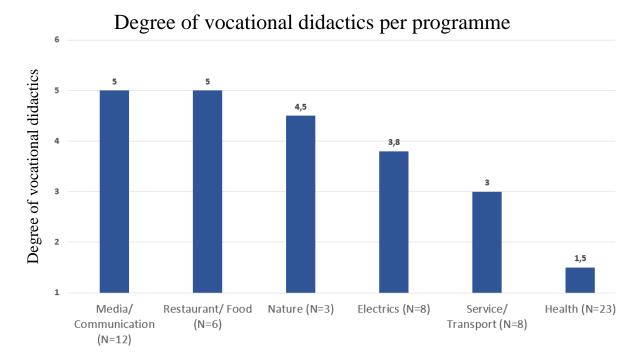


Figure 1: Grade of work-related teaching in the practice teachers' teaching in different vocational programmes according to the student teachers.

Two quotes from the vocational student teachers' focus group interviews illustrated this further:

"My practice teacher had a very clear focus on vocational didactics. We spent a lot of time talking about why and how we teach what we teach. However, I also experienced that some students were not even interested, they did not want to be a cook, and that was that." (Vocational student teacher No. 45: Restaurant and food)

"The practice teacher had some focus on job-related learning but not as much as I thought it would be. I asked her about this, and she said that the students were so much in their practice placements that they need theory in school and not everything could be practically orientated. I never observed any practical lessons. I was not allowed to use the practice room for teaching: that was only for the teachers on the second-year programmes." (Vocational student teacher No. 30: Health)

Similar attitudes were expressed by other vocational student teachers with some experiencing a high degree of job-related activities and encouragement to develop their vocational didactical approach in their teaching. Others did not, and said that job-related aspects were much less in focus than subject teaching and classroom control.

The vocational student teachers said that the next most relevant aspects of learning in teaching practice were school curriculum understanding, differentiating and interacting with students so that they could motivate and inspire them. The student teachers were also interested in gaining experience of a "real teacher's day" and becoming part of the school community.

Factors influencing relevant teaching practice

The vocational student teachers' experiences with mentoring supported the practice teachers' view. According to the student teachers, the quality and relevance of the mentoring varied from excellent mentoring to that of little value. The vocational student teachers who had practice teachers with mentoring education or Master's degree said they experienced their mentors from good to excellent.

The vocational student teachers gave support to the practice teachers' dilemmas on lack of time for mentoring. The student teachers said that it often happened too fast, but said too that mentoring that happened in short episodes in the corridor, on the way to a meeting, often helped them to be less anxious and build up a relationship with the practice teachers. The vocational student teachers also said that much of the mentoring focused on the students' learning and not on their learning as student teachers in practice.

The following quotes illustrate the different attitudes in mentoring as perceived by the vocational student teachers:

"There was little mentoring, I think the practice teacher thought he did it, but it did not give me a lot." (Vocational student teacher No. 7: Electrical)

"The practice teacher had very clear ideas about what worked in the classroom. My ideas were not accepted." (Vocational student teacher No. 55: Service and transport)

"The practice teacher always commented on my plans, sometimes by email. She observed all my teaching. We always talked after I had been teaching. She had always written down points for us to discuss." (Vocational student teacher No. 37: Media)

The practice teachers' role

The vocational student teachers said that the practice teachers did not necessarily think of themselves as teacher educators but that they were the real experts and were important for their learning.

They wanted practice teachers who were motivated and interested in having a vocational student teacher. Their experiences were from practice teachers who were excellent to practice teachers who were "rigid" and gave instructions on how the teaching should be. The following quotes illustrate these two different experiences.

"Practice teachers are concerned about curriculum objectives and school strategies and have constraints about teaching: what works." (Vocational student teacher No. 28: Health)

"My practice teacher was interested in me and maybe as a future colleague, interested in my learning, gave me pride as a vocational teacher and was a role model for me." (Vocational student teacher No. 50: Nature studies)

Many vocational student teachers said that the practice teacher seemed unsure about what was expected of them by the university; others that the practice teacher understood their role and were experienced. Many student teachers also said that the practice teachers asked about teaching course content in university, and asked them about assessment forms and procedures for teaching practice.

Discussion on the findings

There is a degree of understanding between vocational student teachers and practice teachers in what they see as relevant to teaching practice. These are VET curricula, differentiated teaching methods and gaining an understanding of the teacher's complex role. However, the study highlights that there are some differences in what they say is most relevant to experience and learn in their first teaching practice and with their perception of vocational

didactics. The student teachers experienced limited coherence between what they learn in the university and teaching practice. The limited coherence was highlighted in their experiences with teaching job-related activities which varied greatly according to the VET programme. Both groups perceived the practice teachers' role and mentoring as central, but challenging.

All the practice teachers said that classroom leadership was the most relevant aspect to learn in teaching practice. They saw this from two perspectives 1) classroom control, discipline and lack of students' motivation, 2) to lead and organise vocational teaching and learning. The former aspect was more prevalent and supports the research by Aamodt et al. (2016) and Young (2000), which indicate that today's vocational teachers are facing greater demands with unmotivated students, and behavioural problems. This also raises questions about the changing role vocational teachers have in dealing with such groups (Lloyd & Payne, 2012), and the general attitude that VET programmes have low educational status (Young, 2000; Broad, 2016). This study, however, indicates that these challenges vary according to the VET programme with the highest incidence being in Health and Service and transport programmes. This could indicate that classroom leadership, which is clearly defined in Norwegian policy documents (Kunnskapsdepartementet, 2013), needs a clearer emphasis and a broader spectrum than we have today in our teacher education course.

The need for vocational student teachers to focus on classroom discipline and low motivation amongst students should be seen in the light of the relevance debate in vocational education in Norway and internationally (Bødtker-Lund et al., 2017; Dahlback et al., 2011; Hiim, 2013, 2017; Inglar, 2011, 2015; OECD, 2010, 2012; Ofsted, 2017; UNESCO, 2012; Young, 2000). When students experience the learning situation in school as not very meaningful, it is easy to understand their lack of interest which can lead to lack of motivation or behavioural problems and a need for classroom leadership based on discipline.

The study reveals that what "job-related learning" is, is not clear in some VET programmes.

We see a significant difference in what some practice teachers meant they taught and the student teachers experienced was taught. The practice teachers in Health and Service and transport meant their teaching was job-related. However, they also said they experienced challenges with lack of specialist rooms and equipment which can indicate less job-related focus than they intended.

Vocational student teachers also expressed frustration in not being allowed to teach more jobrelated and in not being allowed access to practice rooms or encouraged to visit students in their practice placements. These findings indicate that we need to have a clearer comprehensive approach to vocational didactics in our teacher education both on campus but to a greater degree in the practical field. If the practice teacher does not see the necessity of job-related teaching, then the student teachers are not necessarily encouraged to focus on work-related themes in their teaching either.

That professional education needs to have relevance to the field of work is well documented in prior research (Billett, 2014; Eraut, 2004; Hiim, 2013), but the field of work also needs to have relevance for the vocational student teachers' learning. Vocational student teachers are in the practical field as student teachers, to learn through an experienced and contextual based learning approach (Dewey, 1916, 1933; Schön, 1983, 1987; Vygotsky, 1980) to develop their teaching competence started on campus. The experiences, must be relevant to the complex and diverse job of teachers (Aspøy et al., 2017), but the central aspect is to learn the art of teaching a job (Hiim & Hippe, 2001, p. 31; Haaland-Sund, 2005, p. 23; Sannerud, 2005, p. 211). It is first and foremost in practice, in the unique relationship between the practice teacher, the student teacher and her teaching, that vocational practice-theoretical competence develops and is shown in how that knowledge and skill is applied and used.

The practice teachers uncertainty of the value of observation is a challenge, as are indications that the university's guide for practice is vague about the value and framework for observation. In our postgraduate teacher education, we encourage a period of observation and agree that observation of an expert is an important form for the student teachers learning. In our experience observation can equally provide the basis for reflective discussions where the novice learns from the expert (Dewy, 1933; Nilsen 2010; Schön, 1983, 1987; Skagen 2013). However, the university has not conveyed this clearly, and it has been left up to the practice teacher to decide.

The question of what value the vocational student teachers gain through observation must be discussed with the practice teachers. Not all experience is necessarily valuable (Dewey, 1933), and this raises again the question of what is considered as good vocational teaching practice. That some practice teachers do not permit the student teachers to observe them teaching raises questions on their ability as reflective practice teacher-practitioners (Schön, 1983, 1987).

The vocational student teachers and practice teachers indicated that the practice teachers' role was a significant factor in teaching practice. Their challenges with the role and the mentoring

are similar to tendencies in both national and international research (Clarke et al., 2013; Darling-Hammond, 2010; Graham, 2006; Hiim, 2006). However, the study also reveals that the practice teachers want their role defined and given status by the university. The study also indicates that the guide for teaching practice developed by the university is inadequate. We need to address these aspects urgently.

The experience of role pressure commented on by the practice teachers could indicate that they are under pressure, as Clarke et al. (2013) address, in their roles of teaching their students in school and being a teacher of student teachers. This study gives support to this and indicates that it is the VET curricula which are most in focus, and guide what the vocational student teachers should teach and therefore learn. The student teachers also said that it is the students' learning that is often in focus in pre and post lesson mentoring.

There is some uncertainty amongst the practice teachers about the vocational student teachers' curriculum content which is similar to Zeichner's (2010) findings in that it is common for practice teachers to know very little about the specifics and methods of the teacher education. This study highlights that the practice field is not only aware of this but that the practice teachers want to be updated and more involved.

Hiim & Hippe (2006) indicate that the practice teachers with mentoring education were rated as best by the student teachers. In this study, the vocational student teachers who had practice teachers with mentoring education said they were good, but those with practice teachers with Master's degree experienced their mentors as excellent. They said further that these mentors gave relevant and critical feedback which helped them improve their teaching and had a more vocational approach. This can indicate that practice teachers require more than just mentoring education to be good practice teachers.

Many of the issues the practice teachers address, such as; undefined role, random selection, lack of support, limited contact with the university, and little involvement in curriculum planning, support the claim that the importance of the role of the practice teacher has been reduced. The issues addressed by the practice teachers also support the claim that it is the teacher education which is seen to be the authority on what is important to learn in practice (Clarke et al. 2013; Skagen, 2013 Zeichner, 2010). However, all the participants in this study legitimise the role of the practice teacher as being the "real expert" in what teaching is all about.

The practice teacher appears to use the leeway given by inadequate communication from the university, to form their roles and decide what the vocational student teachers should learn in practice. The indication here is that the relationship between university and practice field, encouraged and stipulated by the policy documents (Kunnskapsdepartementet, 2013; Nasjonalt råd for lærerutdanning, 2014) is more ad hoc than intended.

Implications

Despite its limitations, the current study makes an important contribution towards understanding the campus-practice nebulous and points to several main challenges: Our conceptual approach on campus appears to meet little comprehension in practice and may be understood as more internal coherence than coherence between campus and the practice field. We, therefore, need to establish a more formal dialogue between the university and the practice field on curriculum content and practice guidelines, both on a personal and on an organisational level. Zeichner (2010), in his research also highlights that continuous involvement in curriculum planning will strengthen the theory-practice dimension in line with contemporary challenges.

While there is evidence of excellent job-related teaching within VET programmes, it is not universal, so there is considerable scope for identifying and sharing good practice amongst the practice teachers.

Our study highlights that practice teachers with mentoring education improves relevance in the vocational student teachers' learning but also that practice teachers with a Master's degree offer more relevant guidance to the student teachers than those with mentoring education. We need to look further at mentoring strategies and at what practice teachers with Master's degrees are doing in practice. At the same time, we need to establish flexible mentoring courses and strategies for assessing prior learning of potential practice teachers.

This study also supports prior research that selection of the practice teachers is random and there is a lack of understanding and education for the role (Darling-Hammond, 2010; Zeichner, 2010). We need to look more at the practice teachers' role, its challenges and possibilities in the context of "teacher educator". We also need to develop an equal relationship between teacher groups, campus and practice. This, along with an organised observation period in practice will allow the vocational student teachers access to the expert knowledge that should be available in the practical field (Zeichner, 2010). Similarly, we, as

teachers in universities, need to be more involved in the selection of practice schools and practice teachers than is current practice, as this, at present, is solely an administrative, and not a professional, exercise.

Conclusion and further research

This paper aimed to address a perceived gap of what the practice field sees as relevant in the vocational student teachers' first teaching practice. Throughout the study, we gained a new understanding of the dynamics of teaching practice, its value and the challenges met by those directly involved. However, this study highlights an urgent need for more dialogue between teacher educators on campus and those in the practice areas to develop coherence in our educational programme. Prior research indicates that developing coherent teacher education is challenging and in particular points out the continuing need for close cooperation between campus and practice (Canrinus et al., 2015; Darling Hammond, 2006; Grande et al. 2014; Hiim, 2013, 2015, 2016, 2017).

This study indicates the necessity for our vocational teacher education to rethink its organisational approach and our methods of knowledge exchange both internally and with the practical field.

Based on the findings in this paper a collaborative action research with our vocational student teachers and their practice teachers has been established. The aim is to develop a more coherent approach to our teacher education and an equal partnership between the practice teachers and us. Three working principles guide this work: a collaborative working culture, a developmental approach to contemporary vocational teacher education, and an acceptance for collective accountability and empowerment.

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