



A recruiter, a matchmaker, a firefighter: Swedish vocational teachers' relational work

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Abstract

A central part of Swedish vocational teachers' work concerns their students' work-based learning (WBL). The focus of this article is the character of the relational work carried out by teachers of vocational education and training (VET) concerning WBL. The qualitative study is based on 15 interviews with teachers on the upper-secondary level Child and Recreation, Building and Construction, and Handicraft programmes. The study is based on a situated learning perspective, and uses the concepts of community of practice, broker and boundary crossing. The findings highlight three central aspects of VET teachers' relational work with WBL: recruiting workplaces for WBL, matchmaking between students and workplaces, and 'firefighting' to prevent and deal with problems that occur during WBL periods. The study contributes to the understanding of the work of VET teachers, as they cross the blurred boundaries between school and working life and strive to create a good learning environment for all students during WBL periods.

Keywords: vocational teacher, work-based learning, relational work, community of practice, boundary crossings



Introduction

This article describes and analyses the work that vocational education and training (VET) teachers in Sweden carry out in association with the students' work-based learning (WBL). It contributes to our understanding of VET teachers' work, especially the work they do outside school and the classroom to ensure that the VET students' vocational learning in the workplace is successful.

WBL has a central position in VET. However, the organisation of WBL differs between countries, as do the distribution of responsibility for it and the role of the VET teachers. In some countries, the workplace has full responsibility for the WBL components of VET. In Sweden, by contrast, VET teachers from vocational schools play a central role and have a significant responsibility when it comes to the work-based parts of VET at upper-secondary level. This paper presents a study of the significance of this role in the work of a VET teacher, based on cases from three of the twelve national vocational programmes in Sweden: Building and Construction, Child and Recreation, and Handicraft.

The current Swedish national curriculum for upper secondary school, UpSec11, was introduced in 2011 (Swedish National Agency for Education [SNAE], 2011). It encompasses vocational programmes and programmes that prepare students for higher education, and provides two ways in which VET may be organised. The regular programmes are mainly school-based, but should include at least 15 weeks of WBL during the three years of the programme. The apprenticeship programmes are to be based at workplaces for at least 50% of the teaching, which is described by SNAE (2015) as another method for vocational education. The learning outcomes should be the same, but the learning process differs. The introduction of UpSec11 has changed the work of VET teachers, as VET is now work-based to a greater extent than before. The demands on VET teachers to cooperate with industries and trades, and with the local employers and workplaces, are higher (SOU 2008:27). The workplace now has a central position in vocational learning, as a consequence of the principle that vocational learning should take place in an authentic worklife community (*ibid.*, p. 385). Thus, the cooperation and connection between vocational education and the workplace have become crucial for the outcomes of VET.

The regulations that govern the operations of upper secondary schools (SFS 2010:2039, Ch. 4, Section 12) state that the local board of education is responsible for ensuring that sufficient places for WBL are available. This means that the work-based parts of VET become the responsibility of vocational schools, which usually delegate this to the teachers. Even though WBL takes place in workplaces, where a supervisor should always be appointed, it is the schools and the teachers of vocational subjects who must plan and organise the vocational learning process as a whole. They must also assess whether the students achieve the learning outcomes stated in the national curriculum. Here, it should be noted that

Swedish VET teachers typically have a background in the field of occupation which they are teaching. Therefore, they have a background in the types of workplace in which WBL takes place (Köpsén, 2014).

Studies from the Swedish Schools Inspectorate (SSI) (2011, 2013, 2016) and quality reports from SNAE (2015, 2016) have shown that the cooperation between schools and workplaces differs greatly between schools and programmes, as does the overall organisation of WBL. Some schools have been criticised for sending students to WBL without having sufficient knowledge about learning opportunities at the workplace and for the expected learning outcomes not having been clearly communicated to supervisors. SSI (2011, 2013) has also criticised VET teachers for a low level of attendance at the workplaces, considering their responsibility for assessment and grading. Here, it is important to analyse teachers' work conditions for organising the cooperation with working life.

This article deepens our understanding of the work of VET teachers, with a special focus on the work they do to arrange WBL. The aim is to study what characterises VET teachers' relational work concerning WBL.

Previous research

Since the division between in-school teaching and WBL differs between countries, what constitutes part of the work of a VET teacher also differs. The extensive responsibility of teachers concerning WBL in Swedish VET is uncommon internationally, which means that research on their relational work concerning WBL is scarce. We have here identified a number of studies that can help us understand the working conditions of VET teachers, focusing on the relationship between school and vocational practice and the relational work of the teachers.

VET teachers between school and vocational practice

One trend in VET in recent years in Sweden, as in Finland, is the transfer of students' learning from schools to workplace. This increased emphasis on WBL also affects the work of the VET teacher. The teacher must move the planning for learning and its assessment to the workplace (Vähäsantanen & Eteläpelto, 2009). The research presented in this section focuses on vocational teachers' work with WBL, and how they connect students with workplaces and supervisors.

Teaching vocational subjects differs from teaching theoretical subjects in several ways. The VET teacher's subject knowledge originates mainly from experience and participation in a community of practice in working life, while the subject teacher's knowledge is based on university studies (Hargreaves, 1994). Swedish VET and the work of teachers still take place mainly in schools, but prior working-life experience is a rich source of inspiration in the work of teachers (Berner, 2010; Fejes & Köpsén, 2014). Persson Thunqvist and Axelsson (2012) argue that in order to teach the students difficult professional skills, teachers tend to use their previous experience of work. In this way, the boundaries between

school and work become blurred, and the workplace is reconstructed in the school setting.

VET teachers' work has been described as defining, defending and crossing blurred boundaries between school and the workplace, with conflicting demands (Berner, 2010). This means that VET teachers need a 'double identity', as both a teacher and a craftsman (Fejes & Köpsén, 2014; Nylund & Gudmundson, 2017). Nylund and Gudmundson (2017) show that teachers identify themselves either more as 'teachers' or more as 'craftsmen', and this has implications in terms of what they consider to be important knowledge. The 'teacher' considers teaching skills to be important parts of the work, together with work skills and vocational culture, while the 'craftsman' mainly puts the emphasis on the latter.

One problem that VET teachers describe when students learn a trade arises from the fact that school-based education was designed as something other than workplace-based education (Billett, 2010; Höghielm, 2005, 2014). Therefore, it is difficult to connect students' learning at school with the learning at the workplace (e.g. Aarkrog, 2005; Akkerman & Bakker 2011; Fjellström, 2017; Mårtensson, 2014). International research has shown that an emergent teacher task is to connect students with their future community of practice, and that the role of broker is crucial for the stakeholders to come together in a joint enterprise (Willegems, Consuegra, Struyven & Engels, 2016). Previous research in the Swedish context has shown that teachers play a key role in introducing and connecting students to the learning environments of specific workplaces, and in helping students to consolidate learning at school with learning in the workplace (Köpsén, 2014; Lagström, 2012). This broker role, however, puts the teachers in an exposed position as they become accountable to two 'worlds', and the risk of being criticised is high (Akkerman & Bakker, 2011). However, recent studies have shown that the workplace conditions (concerning equipment use, local demand, and knowledge use) set standards for what students can and will learn during WBL. This may not correspond with the aims set out by the curriculum (Fjellström, 2017; Kristmansson, 2016). Furthermore, the role and work of the vocational teacher change when the students' learning takes place outside school, in the workplace. The role changes from organising teaching at school to analysing the skills used in the workplace and deciding what learning can take place there (Lagström, 2012; Moore, 2004).

To conclude this section, it is important to understand all parts involved in VET teachers' work such as their occupational background, their work conditions, the demands from different stakeholders and how the changes in governing documents provide changing conditions for the teachers' work.

VET teachers' relational work

Teaching always comprises meetings. A good relationship between students and teachers is important for learning, and the ability to build relationships with

students is vital for all categories of teacher (e.g. Aspelin & Persson, 2011; Langelotz, 2014). The VET teacher, who often interacts with students during long hours at school, has the opportunity to develop a solid base of knowledge about the student (Köpsén, 2014). Vocational teachers can also use their experience from professional life by being a 'safe resource person' (Engström, 2009, p. 51). He describes this as the relational work that teachers carry out, as they acknowledge and listen to the students and appear in this way to be committed and trustworthy adults. However, when Engström (2009) describes the teaching activities of professional teachers, it is done from a classroom perspective. Köpsén (2014), on the other hand, describes the professional identity of VET teachers based on their relational work with students. Swedish research has also shown that teachers see fostering as an important part of education as they want the students to develop and mature; no student should be left behind and the teachers want to give the students something to believe in (Berner, 2010; Köpsén, 2014). Widening the students' knowledge and understanding is an important part of the work of a teacher, and this cannot always be satisfied in the workplace (Berner, 2010). VET teachers' relational work goes beyond students and colleagues: it also includes stakeholders in companies and industries, and supervisors at local businesses.

VET teachers use many methods when working with WBL in order to link students' learning at different workplaces with the requirements set by the curriculum. Therefore, the way in which they cooperate and communicate with WBL providers may vary with time and situation (Billett, 2006; Vähäsantanen, Saarinen & Eteläpelto, 2009). Vähäsantanen et al. (2009) unwrap different ways of connecting with the workplace where the individual teacher's thoughts on how to work with the workplace affect the cooperation between school and the workplace. The different roles VET teachers take on are relational constructions, and they are defined relative to complementary and interrelated roles. Without a student, there will be no teacher; without a workplace, there will be no WBL. This means that VET teachers' work must be put into a broad context that includes the workplace (Billett, 2008; Isopahkala-Bouret, 2010). The relationships that arise at the boundary between workplace and school are also important for teachers as a source of professional development, and as a means to keep their vocational subject knowledge that is situated in working life up-to-date (Köpsén & Andersson, 2018). When students spend more time at the workplace there is less time for teachers to foster and teach. The supervisors become more important for the students, but the outcomes are still the responsibility of the teacher. This broadens the VET teacher's role from merely teaching to brokering between the student, the WBL community of practice and the school, which increases the emphasis on the relational work. However, little is known about the character of this relational work concerning WBL in Swedish VET.

Theoretical perspective

This article concerns the work that VET teachers carry out at the boundary between school and the workplace as part of WBL. These two contexts, school and workplace, can be related to Lave and Wenger's (1991) concept of 'community of practice'. VET teachers in Sweden have a solid base in their former occupation and know the community of practice well. As VET teachers they enter another community of practice, school, but they need to keep in touch with their old practice as well. Wenger (1998) describes how practice is associated with doing, although this doing occurs in relation to a historical and social context. A community of practice is the environment in which these practices are developed, negotiated and shared as an essential part of our learning. The community here, therefore, consists of both the community in its wider sense of a practice, and the individual company or workplace. A community of practice is defined by mutual engagement and a joint enterprise, which means that it shares norms and values, as well as a collective and mutual understanding of what it means to belong to the community and what this stands for. Wenger (1998) also emphasises the development of a shared repertoire that contains common resources, comprising activities, symbols, language and artefacts that are symbols for the community.

Lave and Wenger (1991) described the learning process that newcomers must undergo in order to become a part of a community of practice as 'legitimate peripheral participation'. The concept of being 'peripheral' changes over time, influenced by newcomers' learning trajectories and identities (Lave & Wenger, 1991). Some individuals have a form of identity as a broker, which enables them to introduce elements of one practice to another (Wenger, 1998). Not all multi-membership entails brokering, but such brokering involves '... a process of translation, coordination, and alignment between perspectives' (Wenger, 1998, p. 109). It is a complex process that requires a belonging and a distance. The broker must have knowledge about the practices, and must have sufficient legitimacy to justify influence and being listened to. WBL is here a path for students to enter a community of practice, and the VET teacher can function as a broker for admission to that community. WBL is a school-related phenomenon situated in different workplaces, and the teacher works on the boundary between school and workplace.

This theoretical perspective has been criticised for putting too much emphasis on the importance of learning at the workplace, resulting in VET schools (and VET teachers) having a low status as learning institutions (Tanggaard, 2007). Tanggaard (2007) challenges this perspective and argues that the boundary crossing between the VET school and the workplace actually enhances learning. The tension between a vocational school and the workplace can be seen as a relationship between strangeness and familiarity. In the struggle to make sense of this

relationship, students learn the vocation and develop an identity as a tradesperson.

Methods

Here, we report the findings from a qualitative study in which 15 interviews with Swedish VET teachers have been transcribed and analysed thematically. The teachers were active in three different vocational programmes at upper secondary level: (1) Child and Recreation, (2) Building and Construction, and (3) Handicraft. These programmes were chosen for the following reasons: (1) the Child and Recreation programme has achieved good results from work-based learning (SNAE, 2016), (2) the Building and Construction programme is the one with the highest number of apprentices (and, thus, a programme that involves much WBL) (SNAE, 2017), and (3) Handicraft is an area with a long tradition of apprenticeship and WBL (SOU 2009:85). Five interviews were conducted with teachers from each programme. The Handicraft programme is broad, and the teachers interviewed had previously worked as hairdressers (two teachers), a stylist, a goldsmith, and a cabinet-maker. The interviewees were employed at eight schools in seven municipalities.

The sample of teachers was based on a register of where the various vocational programmes are located, and requests were sent to the heads of several schools where the three programmes were taught. Teachers from schools whose heads agreed for interviews to be conducted were invited to participate, and those who accepted were interviewed. Teachers were selected continuously, in order to obtain a sample with a range of properties concerning schools and municipalities, age, and experience as VET teacher. Only one interview for any one programme was conducted at the same school, but teachers from two programmes at the same school were interviewed in two cases. Not all VET teachers had experience from apprenticeship training. Some were working only with adult vocational education, but all had experience from VET at upper secondary schools. All five Child and Recreation teachers were female. In Handicraft, the hairdresser, stylist and goldsmith teachers were female and the cabinet-maker teacher was male. All five interviews in Building and Construction were carried out with male teachers.

Twelve interviews (in Swedish) were conducted face-to-face at the schools where the teachers worked. One interview was conducted via Skype and two via telephone, due to the distance that made visits to these schools impractical. The interviews lasted between 45 and 75 minutes. All interviews except two were individual. In the two exceptions, the interviewees requested that a colleague join the interview, to contribute more information. This request was accepted. One of the interviews with two participants was with hairdressers from the Handicraft programme, and the other was with carpenters from the Building and Construction programme. Thus, six interviewees participated from Handicraft, six from

Building and Construction, and five from Child and Recreation, giving a total of 17 teachers and 15 interviews.

The interviews were semi-structured and covered the following themes: thoughts on WBL, the tasks of teachers related to WBL, school/teacher cooperation with the workplace and other stakeholders in WBL, characteristic features of a good workplace for WBL, and the differences between being an apprentice teacher and the regular VET teacher job.

The interviews were recorded and transcribed verbatim (again in Swedish). Between the interviews, notes and reflections from each interview, including relevant quotations, were written down. This material formed the basis of the initial analysis. In the written text, the informants have been given names with initials consistent with the programme in which they work (e.g. 'Bengt' at the Building and Construction programme).

When all interviews had been conducted, a thematic analysis of the material was carried out, using the research question as a guideline (Boyatzis, 1998; Braun & Clarke, 2006). Themes were created according to how the teachers talked about their work. Patterns that could be identified in the material became themes. Such a theme may contain quotations from all of the programmes, while in other cases there were obvious differences between the programmes. Such differences are described below. In the 'Findings' section, quotations from interviews are used to illustrate the themes and categories. These quotations have been translated into English.

The study follows ethical principles for research in the humanities and social sciences (Swedish Research Council, 2011, 2017), including protection for each participant through information, consent and confidentiality.

Findings

The aim of the work reported here was to describe and analyse the work done by VET teachers in connection with WBL. Teachers often report that they lack the time necessary to do this work (SSI, 2017). But what does the work consist of? Our findings show that a large part of the work of VET teachers with WBL concerns finding placements. This involves matching a student to the right workplace and supervisor, and the constellation thus created may subsequently need help from the VET teacher. We describe and categorise this work using the following themes: Being a recruiter, being a matchmaker, and being a firefighter.

Being a recruiter

'Being a recruiter' consists of the various ways of finding placements that the teachers describe. Teachers use their social network, obtain help from administrators, let students find their own placements, and are approached by companies asking for students.

Using the social network

Successful recruiters are skilled and experienced workers in the trade, which ensures that they have extensive knowledge and a wide network. Several VET teachers expressed having a broad network as an advantage. Old friends and acquaintances are often useful resources in finding work placements, as shown by Henrik and Clara:

Now the thing is that my colleague and I, we know this industry quite well. We know the entrepreneurs, and when something new turns up, we find out about it. (Henrik)

Well, yes, it may be that I have contact with old colleagues, because the coordination doesn't work really, and then you have to call old colleagues. (Clara)

Being a recruiter also requires that the teachers know the culture in a prospective company – whether it is, for example, driven by an intense desire for profit, or whether the manager can give an employee an hour or two to supervise and teach the student the job. This means that an effective recruiter must have reliable knowledge of the local trade and of newcomers in the field. The teachers pointed out that a social network needs to be maintained, which requires time and effort. Birger argues that:

I was out driving and saw a company car, [and I thought] 'I haven't seen that one before, I wonder who it is'. So I followed. And we drove all the way to the office, as it was the manager himself, and we went in and talked to him. 'Yes, we could try that' ... You have to be a bit pushy, you can't just sit and wait for things to happen.

Being a recruiter is constant and ongoing work, and the teachers emphasise how important it is to have a large social network. VET teachers with poor knowledge of the local trade face challenges in the recruitment process, although the absence of a network is not always negative. Hilda gives an example of when the absence of connections and a lack of prejudices turned into something positive.

While I had a blank sheet, I knew nothing about any salons, I knew nothing about the supervisors. And in that way I thought it was quite good, because I had no pre-conceived ideas. My colleague could say 'No, not that salon, I don't like that supervisor', while I said 'Yes, we'll give it a try, see what happens here'. And it turned out really well in some salons when they took on students. (Hilda)

Receiving lists from an administrator

VET teachers may be assisted in finding placements through a formal system in which administrators compile lists of work placements from official records. This differs greatly from the method described above in which the teachers use their own networks. Some teachers on the Child and Recreation programme have a coordinator or administrator who sends requests to principals, daycare managers and other officials, asking for a number of placements for a special purpose, on specific days and weeks. The teachers are given a list of possible placements and

the names of the supervisors. Some placements and supervisors are the same from one year to another, while others are new.

They [the VET teachers] have to send requests for how many places they need, when and for what, if it is disability or children... Then they get lists of who can receive [a student] and then... (Christina)

Letting students find their own placements

A more informal system of finding work placements is to let the students find their own. This can be justified by the need to develop an entrepreneurial ability in the students, and giving them the opportunity to 'sell' themselves to a specific employer or supervisor (as in the quotation below). Helena gives a further justification of letting the students find their own placements:

... that is also a bit difficult for us, if we know that it is a student who doesn't behave well, then it is very tough to call a [hairdressing] salon and ask if they can take a student on placement. [...] It's quite simply a dilemma, because you need to have a good relationship with the supervisors at the salons. They think that 'Well then, if you're going to send such a student to us...', and then we are responsible [laughter] ... for the problems that arise.

Helena emphasises the long-term negative consequences of this: 'But it is also at the expense of the reputation of the school in the trade [...] Because that is where our students are going, and they'll become colleagues in the future'. A colleague of Helena describes the advice she gives to students looking for work placements: 'I tell them, you should ask someone in a small company who does a lot of work with older women. Don't you have that kind of company in your neighbourhood?' (Hanna). This is another way of finding placements, and matching students and companies in an informal way, without risking being so closely associated with the student that his or her wrongdoings will spill over to the school and the teacher.

On the watch for headhunters

In some cases, a VET teacher is approached by companies looking for students to undertake WBL at the company. Bengt says:

NCC are planning to build up here on the hill, and they were here and talked to our head and two teachers. They want us to get involved in the project.

Another teacher described how companies sometimes phoned him, looking for apprentices.

... this is a gamble, are they calling just because they need labour? [...] If so, I usually tell them that 'Yes, we've got one, but then you must employ this guy when he leaves school this summer. Because it's clear you need one more'. And then they might agree to this. [...] So you make demands on the company too. (Hans)

Work placements are generally hard to find, which means that when they appear easily as in this case the VET teachers must be careful – there is a risk that the company mainly wants free labour and will not provide a good learning environment for the student. The cases described by Bengt and Hans differ from other cases, as the most common answers that the teachers gave to questions about finding work placements concerned how difficult and time-consuming it is.

It becomes apparent here how the community of practice is an important part of the VET teachers' work. They need the members of the community and have to adjust to their desire, while at the same time having to comply with the school's curriculum and standards for workplace learning.

Being a matchmaker

The recruitment phase is followed by a phase in which the VET teachers act as matchmakers between the student, the workplace, and the supervisor. The goal is to match each student to a workplace, and the learning outcomes for the student are always an important factor in this. The teacher may carry out the match-making in a manner characterised by tact or by improvisation.

A central aspect in the matchmaking process is to strive for a good learning environment, something that can be characterised in two ways. It may be a workplace at which a variety of work tasks are carried out and where the student can see and follow the entire process from yarn to suit. The student is new in the community of practice, and such a workplace gives the student an opportunity to gain an understanding of the complete work process. This is one starting point for a description of the good learning environment. Alternatively, the workplace may be a small company at which only a limited range of work tasks is carried out. Such a workplace may be used in cases where the needs of the students that must be satisfied to enable learning must be given priority. Thus, any one company can be a good learning environment for certain students, and a less suitable learning environment for others. The teachers pointed out that all students follow the same curriculum, but students have different needs, knowledge, and desires. This makes it necessary to match students to the available workplaces. This is a difficult aspect of relational work, since the teacher has only a few weeks to get to know the students and to match them with a workplace. Billy describes how he works alongside a colleague and how they talk about what the 'good workplace' is for each student.

They study the building and construction subjects three days a week, and we try to give them a basic education and training at school. [...] at the same time I get to know how they act and work, what values, what ideas, what qualities they have, what weaknesses and strengths they have. In this way we are able to find a placement. [...] So we sit down and have a small conference up there, and go through every pupil, where I describe the experience I have of the guy. And he [the colleague] has an overview of all the building companies, so he knows who can take which pupil, and he knows what work tasks they should start with, so then he can distribute the pupils according to their needs.

Being a matchmaker is a job that requires knowing students, workplaces and supervisors to match personal and learning needs. The teacher's knowledge of the community of practice is particularly useful here.

Tactful or improvised

In doing this job, teachers act mainly in two different ways. They can act in a manner characterised by tact or by improvisation. Tactful matchmaking can be used when the VET teachers know the students well. In this case, both personal needs and learning needs can be considered, and the teachers know the workplaces and supervisors well enough to ensure that the match is optimal. Tactful matchmaking can only occur if certain conditions are met, which makes it difficult to achieve. Teachers from all three VET programmes expressed a desire to use tactful matchmaking, but described several factors that made it difficult. VET teachers with large groups find it difficult to get to know all the students, while teachers with small groups find it easier to get to know their students and their needs. Cecilia, an experienced teacher on the Child and Recreation programme, has all the information she needs at her fingertips:

I have such a large network, and as soon as there is someone who has special requirements for their placement, then almost immediately a bell rings for me – who, where, what place. And then there's a period in which the decision matures, you just let things rest, and suddenly the penny drops. So almost all the time I'm using my network, contacts and so on, and then the right person always gets into the system in some way. It's quite weird, really. That it comes to you, somehow.

Cecilia does all the matchmaking work herself. This is easy for her since she lives in a small community, has a large network, and is close to the local community of practice.

Another way of handling the matchmaking is to use improvisation. This may occur, for example, when teachers receive lists from administrators with workplaces and supervisors to match with students. It might be expected that the matchmaking process will be smooth and fast in this case. However, in order to achieve a good learning environment, the VET teacher must decide which student to assign to which workplace and supervisor. Given a list of 50 workplaces and 45 students to distribute between them, the matchmaking work will necessarily be improvised, since the teacher has not done the groundwork personally and does not know all the people on the list. Of the three units to match – student, workplace and supervisor – the teacher has knowledge of only one or two of them. Here, there is no connection between the teacher's matchmaking and the community of practice.

In summary, the work of VET teachers with WBL includes matching students' educational and personal needs and wishes with the staffing and business needs of workplaces and supervisors, to create a learning environment that is optimal for all parties. This task involves several difficulties of different types.

Being a firefighter

Firefighting is the work the teachers do mainly when the students are carrying out WBL. The concepts of 'fire' and 'burning' are used as metaphors for what can happen when students and supervisors come together in a work placement. The metaphor describes a critical incident in the relationship. In the worst-case scenario, such an incident causes the supervisor to withdraw from the assignment. Firefighting operations range from preventative work to clearing up after a fire that has destroyed any possibility for a workplace to be used for future work placements.

All the teachers used the metaphor of 'burning' when the behaviour of a student causes the supervisor to tell the school that the student cannot continue the work placement. In the worst-case scenario, the workplace turns down all future students, and in such cases the student has 'burnt' that workplace. Several reasons for the relationship collapsing were identified: the student was not ready for work placement, the relationship between the supervisor and the student simply did not work, or the supervisor had not fully appreciated what it meant to have an apprentice. In cases in which the students are referred to as the cause, the VET teachers describe them as immature or unmotivated. 'Immature' is often expressed as a reluctance to attend work on time, or as a tendency to spend too much time using their phones. Bengt describes typical student behaviour that caused the supervisor to call him.

When the supervisor called and said that he [the pupil] had not turned up yet, I called him and said... He had overslept. So I talked to the supervisor and then he said that the pupil [usually] arrives late, and, yes... So I talked to the pupil, and he said that, 'Yes, but they don't leave until 7 anyway, so I arrive at five to.' 'It doesn't matter,' I said, 'If you start at quarter to you must be there at quarter to.' ... This was followed by a lot of time on the phone.

This is a typical description of the work VET teachers talk about doing when students are carrying out WBL. VET teachers at different schools and programmes work under different conditions. In this case, the teacher had time to answer when the supervisor called, visit the workplace in question, and talk to the student and the supervisor. The fire was put out quite rapidly, before it could do much harm. This is one way to suppress a smouldering fire, but the work situations of most teachers are hectic, and they cannot always stop what they are doing and leave to deal with an incident. Carin states that it can take several days before she has the opportunity to talk to the student.

Then sometimes it just doesn't work for a student. Then I have to discuss it with the supervisor, and then the student comes here on Monday, and I have to talk with the student about it.

The teachers are not present at the workplaces when incidents occur, but they still take responsibility for them, and relate them to a mismatch from their side. In doing so, they take responsibility for the fire.

You also have to evaluate why it didn't work. Then you learn about the personal chemistry. About the student, and about the supervisor. Then we come back to what we discussed earlier [...] that it is important to get to know your supervisors and students. And this is also something that is part of our role as [VET] teachers. We have to carry out tasks like this all the time, but it is not stated in our working instructions that we should spend time on this. And it could mean going out and trying to mediate between a supervisor and a student who are not on speaking terms. (Billy)

Billy is aware of the difficulties he encounters in his job. He wants to be a 'safe resource' and to be there for his students and supervisors, but there are many obstacles along the way. Billy knows the importance of arriving at work on time in order to become a member of the community of practice, and he emphasises this to help his student become part of that community.

One important firefighting task that the teachers brought up is preventive work with both students and supervisors. It is necessary to teach the students not only work skills, but also the 'hidden rules' to be aware of at work; how to behave, and what to do if something happens at the workplace. Teachers can discuss 'the youth of today' with supervisors, and give advice on how to act and talk with the students, to make the supervisors aware and more prepared to be good role models.

We have analysed the work of Swedish VET teachers with WBL, and discovered some hidden aspects that this work includes. The work with WBL starts long before the students arrive at the school; it never ceases; it connects many participants; and it involves many relational aspects. While the work of other teachers can be described as planning, implementing, and following up on classroom teaching, the work of VET teachers consists of planning for learning in what can be an unknown environment, with different stakeholders in communities of practice where teaching is not a task they normally carry out. It may seem at first glance that having students carrying out WBL is 'time without students', but the results presented here have provided a broader perspective of the relational work concerning WBL.

Discussion

This study has identified the characteristics of VET teachers' relational work with WBL as being a recruiter, a matchmaker, and a firefighter. A significant finding is the amount of work put in by the teachers before and during WBL. With more student time spent at the workplace, the teachers have more time to plan and assess learning they are not participating in. Students learning in an occupational community of practice but on school terms gives the VET teacher the role of a

boundary worker. Mediating between school curriculum, workplace resources and personal desires and needs is different to the regular teacher tasks. With their background in the trade they are educating students on, the VET teachers have a base in the community of practice. The broker role is, with more time at the workplace, not an emergent task but a real task that needs more attention. In this planning for learning, the teacher's private network and engagement in the local community of practice becomes a key aspect that is not always thought of as a teaching skill.

A key finding in our analysis of the work teachers do in finding WBL placements for their students shows how important their personal connections and networks in the local community are. The school is responsible for providing WBL placements, but the work presented here shows that the school relies on the teacher as a recruiter, using individual and personal networks to find the placements. As previously shown by Fejes and Köpsén (2014), the teachers in our study also draw upon social networks, contacts, and knowledge of the local community of practice, in combination with their relational knowledge (Aspelin & Persson, 2011), to find positive learning environments. However, this shift of focus from a school responsibility (as stated in UpSec11) to a personal responsibility of the teacher has the consequence that a failure to find placements becomes an individual failure: it is the teacher's 'fault' for not having a sufficiently extensive network.

During the *matchmaking* process, teachers use their double identity as described by Fejes and Köpsén (2014) to match students to workplaces. With their double identities, VET teachers can introduce students to the norms and values of the workplace as part of the enterprise and repertoire that they share with the supervisors in the workplace (Wenger, 1998). Furthermore, they can negotiate effectively with the workplace since the VET schools and the community of practice they educate for have a shared mutual engagement in the industry. A VET teacher with knowledge of the trade and its local community of practice, and with accurate knowledge of the students, has the relational knowledge required to act as a broker. Such a teacher can effectively align students, workplaces and learning. This knowledge enables them to create what Akkerman and Bakker (2011) describe as 'sameness and continuity' (p. 133), a situation in which the differences between school and workplace practice are comprehensible for the students, and the two communities create meaning for the students.

The work of VET teachers with WBL can be characterised by Wenger's (1998) term 'broker', since it involves creating interconnections between all stakeholders: staff at the workplace, supervisors, students and others in the learning environment. The findings show that a positive learning environment can be created, and vocational learning can emerge if the workplace and its supervisors are prepared with sufficient information about the student and the conditions for learning are made clear. It is also necessary to prepare the student for WBL. If this

preparatory work has been successful, the teacher can take a step back, while his or her former colleagues in the trade continue the introduction of the students to the community of practice. Wenger (1998) describes the work of a broker as 'a process of translation, coordination and alignment between perspectives' (p. 109). Similarly, the findings show that the role of broker is complex, since it requires both belonging to the community and maintaining distance from it, and involves multimembership. One issue that VET teachers often point out is that they lack time for work associated with WBL (e.g. SSI, 2011) and that they can seldom be a part of the WBL, making it difficult to create. Vähäsantanen et al. (2009) call this a 'relationally emergent agency', and the teachers are compelled to act within a restricted agency.

Many studies describe VET teachers as 'boundary crossers' (e.g. Akkerman & Bakker, 2011; Köpsén & Andersson, 2018; Berner, 2010; Fejes & Köpsén, 2014; Tanggaard, 2007). The work presented here broadens this picture, by describing and analysing the work content of VET teachers. This has revealed the teaching skills that VET teachers need in order to fulfil the task of planning for learning at the workplace. Akkerman and Bakker (2011) describe a boundary crosser as a person who interacts between different sites and in unfamiliar territories, whereas Swedish VET teachers act in two communities, both of which are familiar to them. Here, it is important to see that VET teachers extend the boundaries between school and work. Workplaces must adapt to school regulations in their efforts to educate skilled workers, and schools can gain credibility by entering into working life. We describe here not solely boundary *crossing*, but rather boundary *extension*, since the regulations that apply at school are to be extended to and applied in the workplace.

Our study confirms results obtained by SSI (2011, 2013), namely that VET teachers are rarely available at the workplace. Their work consists to a great extent of preparing students and supervisors for WBL, here described as the preventive work of a firefighter. Once the students have started the period of WBL, the work of the teacher becomes that of 'looking in from the outside'. It may be difficult to act as a teacher from this external position, using legitimate peripheral participation to guide the students in their journey to become members of a community of practice. The supervisor may in such cases become 'the teacher', without having the legal responsibility for the student. Many of the teachers interviewed in the work presented here stated that it is difficult to find suitable workplaces and supervisors. Supervisors who are central members of the community of practice and who have experience in the role and knowledge of the school's norms and values can engage in the joint enterprise of fostering the next generation of community members. Together with the teachers they can create a positive learning environment for the students at the workplace. We show here that the teacher must have extensive knowledge of the students, supervisors and workplaces, in addition to his or her vocational knowledge of the subject.

Strengthening WBL may be achieved by upgrading the role, responsibility and knowledge of the supervisor, or by giving the VET teacher more time to spend with the student and the supervisor at each workplace, in this way deepening the connection between the school and working life.

Conclusions

VET teachers with a solid background and strong connections in the local community of practice of their initial occupation can give students better conditions for their WBL than teachers without such connections. The balancing act of 'being neither in nor out' in a relationship with a workplace can give VET teachers a role as brokers for admission to the community of practice. They must be critical teachers who place demands on workplaces and supervisors, while at the same time balancing this with the need to create good relationships with the workplace and its stakeholders. The many relationships connected to the role as broker contribute to the diversity that being a VET teacher involves. The VET teacher's community of practice goes beyond the school and is larger than that of most other types of teacher. VET teachers carry out relational work on the boundary between school and the workplace. Thus, the dilemma of being a teacher *or* a craftsman is a false dilemma. A teacher who has a solid base in the curriculum and who is at the same time a skilled craftsman can coexist with the supervisor, the workplace and the student, and create a positive learning environment for the student.

Nevertheless, the extended boundary of VET into the workplace accompanies the student and the teacher, and the workplace must relate to this. What is seen as the realm of the teacher (the school environment, teaching techniques, curriculum, etc.) expands and develops relationships with several stakeholders: individuals, companies and organisations. The workplaces and their stakeholders have a great impact on the work that the VET teachers do. In turn, the VET teachers assume a huge responsibility for providing the labour market with qualified workers, and the response they receive from workplaces has an impact on a personal level.

This study has painted a picture in which the VET teacher requires excellent knowledge not only of the vocational subject, but also of the market, companies and supervisors. This emphasises the need for social skills, since the teacher must 'sell' the VET programme and the students to appropriate work placements and supervisors. The work of the VET teacher has been described as setting priorities for what the student needs to learn next and determining the optimal development location for each student – school or workplace. The VET teacher with deep and personal knowledge of all students can carry this out, and it is a task that is seldom described as part of a teacher's duties. We have shown here how VET teachers navigate between supervisors with strong ideas about how students should behave, companies looking for cheap labour, and companies with a truly

good intention to promote learning. Therefore, the teacher must navigate between the two communities of work and school, and risks being criticised by both. One way of dealing with this is to remain more in the role of a craftsman, or to take on more the role of a teacher. This choice has consequences, and is a classic dilemma that must be highlighted.

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