This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Vähäsantanen, Katja; Hämäläinen, Raija

Title: Professional identity in relation to vocational teachers' work : an identity-centred approach to professional development

Year: 2019

Version: Accepted version (Final draft)

Please cite the original version:

Professional identity in relation to vocational teachers' work – An identity-centred approach to professional development

Katja Vähäsantanen & Raija Hämäläinen

Department of Education, University of Jyväskylä, Finland

Katja Vähäsantanen, *Corresponding author*

University of Jyväskylä, Department of Education

P.O. Box 35 (RUU D422)

40014 University of Jyväskylä, Finland

Tel: +358503290678

E-mail: katja.vahasantanen@jyu.fi

Biographical notes

Katja Vähäsantanen, PhD (adult education), is a senior researcher in the Department of Education at the University of Jyväskylä, Finland. She is currently working on the REAL research project, which investigates emotions in agentic learning at work. Her current research and teaching interests lie in the areas of professional identity, agency, learning, leadership, and emotions in work organisations. Her recent publications include articles in Teaching and Teacher Education, Professional Development in Education, and Educational Research Review.

PhD Raija Hämäläinen works as Professor in the Department of Education at the University of Jyväskylä. She has designed a long-term research project that focuses on investigating new learning spaces for future vocational education. Currently, she is leading several research projects focusing on vocational education and training. Her recent publications include articles in Computers & Education, Teaching and Teacher Education, Vocations and Learning, Journal of Vocational Education & Training, and Educational Research Review.

Professional identity in relation to vocational teachers' work – An identity-centred approach to professional development

Katja Vähäsantanen & Raija Hämäläinen

Department of Education, University of Jyväskylä, Finland

This paper reports a study on teachers' professional identity and work in vocational education. The findings showed that vocational teachers' work included vocational teaching within the school, developmental work, technology-enhanced work, professional duties outside the school, and educational duties within the school. Furthermore, the study revealed the harmonious and tensioned relationships between these elements of the work and teachers' identities. Recognition of the nuanced nature of these relationships provides a perspective for promoting teachers' professional development. From a practical perspective, there is a need to support vocational teachers' identity work and the adoption of new technologies for their teaching. The findings also illuminate the emotionally-imbued relationship between work and professional identity.

1. Introduction

Changes in society and in work practices impose demands on teachers, who are required to engage in continuous learning and development. Teacher learning is a key to the quality of teaching, to students' learning, and to school development (e.g. Labone & Long, 2016). Current discussion has provided insights on teachers' agency, noting its connection to their learning, and to the development of schools (e.g. Pietarinen, Pyhältö, & Soini, 2016). However, there are good grounds for supposing that to understand teachers' professional development, it is not sufficient merely to elaborate their agency; one must focus also on their *professional identities*. Indeed, Philpott and Oates (2017)

argue that it is impossible to change social practices in a school without understanding and cultivating teachers' professional identities. The present study aims to contribute to the discussion, taking an identity-centred perspective on teachers' development. It thus explores teachers' professional identities and work in the context of Finnish vocational education and training.

In many countries, vocational teachers have faced pressures to develop their educational practices to respond to new needs in society and working life (Fejes & Köpsén, 2014; Ketelaar, Beijaard, Boshuizen, & den Brok, 2012). This has led to attempts to integrate education and work more closely. In Finland, too, recent reforms in initial vocational education and training (encompassing upper secondary education for students mainly aged 16 to 19 years) have aimed at this kind of integration, including attempts to transfer some of the learning to workplaces outside the school.

There are various other trends influencing vocational teachers' work. These include demographic developments, the introduction of new teaching and learning methods, and diversification in the target groups of programmes (Ketelaar et al., 2012; Kirpal, 2011). New practices are also needed due to the fact that vocational education increasingly takes place in technology-enhanced learning (TEL) settings (Hämäläinen & De Wever, 2013; Motta, Boldrini, & Cattaneo, 2013). As a consequence, teachers need to undertake new tasks and develop novel instructional activities – aspects which in themselves could pose a challenge to the teacher's professional identity. All this implies that we need an elaborated understanding on how to support vocational teachers and their professional development (Billett, 2014).

In the study reported here, we wished to investigate how Finnish vocational teachers describe the elements of their work, and the relationship between their work and professional identity. Although there has been only limited empirical research on

the relationships between work and identity, particularly with regard to vocational teachers, this relationship is important, given that the relationship between one's work and one's professional identity has effects on well-being, job performance, organisational commitment, and the emotional experiences of the work (Akkerman & Meijer, 2011; Kira & Balkin, 2014).

The study indicates that in efforts to promote teachers' professional development one should recognise the nuanced, individual nature of the relationship between their identity and their work. We also suggest that future research should elaborate the extent to which the relationship is imbued with emotion. Finally, we make practical recommendations for supporting vocational teachers' professional development amid the changing landscape of vocational education.

2. The conceptualisation of professional identity

According to Pillen, Beijaard, and den Brok (2013), teachers can use professional identity as a resource for making sense of themselves and of educational changes (see also Vähäsantanen, 2015) and for informing their work and pedagogical practices (Farnsworth & Higham, 2012). A more theoretical viewpoint, adopted here, is that professional identity can function as a lens for analysing work and life in relation to being a teacher (Davey, 2013; Köpsén, 2014; Pillen et al., 2013).

In the domain of teaching, professional identity is generally defined as a constellation of perceptions and conceptions regarding how individuals view themselves as teachers (Akkerman & Meijer, 2011; Beijaard, Meijer, & Verloop, 2004; Fejes & Köpsén, 2014). A teacher's professional identity also encompasses the individual's professional interests, goals, values, and beliefs (see also Ruohotie-Lyhty & Moate, 2016). Drawing on a literature review, van Veen and Sleegers (2009) have provided a broader picture of the components of a teacher's professional identity, identifying in

particular job motivation (i.e. what motivates the person to become and remain a teacher), core responsibilities (i.e. what the teacher views as his or her essential tasks), self-esteem (i.e. the value the teacher attaches to his or her performance), beliefs about teaching (i.e. what good teaching is and what to teach), subject and subject pedagogy (i.e. the nature and content of the subject), and teaching as work (i.e. how to work as a professional). In addition, professional commitments form an important component of teachers' professional identity. Professional commitment can be defined as the combination of teachers' professional interests, core values, aspirations, identifications, and views of their meaningful roles (Davey, 2013; Tao & Gao, 2017; Vähäsantanen, 2015). Professional commitment thus covers matters related to one's teaching, and to the learning of the students (see also van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen, 2017).

In addition, some authors have examined professional identity particularly in terms of the professional knowledge (e.g. subject matter knowledge and pedagogical knowledge) which teachers must possess and act on (Beijaard, Verloop, & Vermunt, 2000). For vocational teachers, the knowledge-based element of identity also includes the professional skills related to their previous occupations in the vocational field (Fejes & Köpsén, 2014). In line with these notions, Davey (2013) suggests that professional identity can be understood and investigated as the combination of being (including professional values, emotionality), knowing (e.g. the professional knowledge base, experience, perceived skills), and doing (e.g. priorities, commitments).

Utilising these conceptualisations, we understand professional identity in terms of the following components, derived from current literature: (a) *professional commitments*, including the teacher's perception of his or her core professional interests and meaningful responsibilities, plus views on students' learning to which he or she is

committed; and (b) *professional competencies*, encompassing the teacher's perception of his or her professional competencies (e.g. pedagogical knowledge and vocational field-related skills). Below, we describe how professional identity should be understood and investigated in relation to the work and its (changed) contents, and in one's social relations (e.g. with students and colleagues).

3. Professional identity in relation to the contents and social relations of one's work

While professional identity is based on people's life experience and history, it is further developed and negotiated in relation to the social conditions and demands relative to the individual's current work (e.g. educational practices, curriculum, power relations, and work conditions), and to other people, such as colleagues and students with different motivations and needs (Davey 2013; Day & Kington, 2008; Farnsworth & Higham, 2012; Köpsén, 2014). Along similar lines, Ruohotie-Lyhty and Moate (2016) have found that for the development of teacher identity it is crucial to work with one's personal histories and experiences, and to be a member of a specific group. For her part, Arvaja (2016) emphasises that teacher identity is constructed through the dialogical process of positioning oneself in a relationship between the self and the context.

For vocational teachers, identity negotiation occurs in the school, in the workplace, and in arenas where these converge. Furthermore, Fejes and Köpsén (2014) suggest that a vocational teacher develops his or her identity as a teacher by crossing the boundaries between prior occupations, teacher training, and the current occupation as a teacher (see also Farnsworth & Higham, 2012). This is not always an easy task, since many teachers are unable to balance their teacher and occupational identities.

Other studies have also shown that the construction of the teacher identity often comprises tensions and struggles (Beijaard et al., 2004). Pillen et al. (2013) found that

such tensions can emerge, for example, in situations where novice teachers want to invest time in practising their teaching, but feel pressured to invest time in other professional tasks. Furthermore, tensions are often accompanied by feelings of helplessness and anger, or by an awareness of one's shortcomings. Professional identity negotiations are not required only of young teachers; experienced teachers, too, must take part in these negotiations. Professional identity is thus not seen as stable within one's teaching career (e.g. Akkerman & Meijer, 2011); rather, it is a matter of ongoing negotiation between the individual's background and social conditions (Beijaard et al., 2004; Vähäsantanen, 2015). For experienced teachers, educational changes, especially large-scale ones, are the most important situational factors that push them to re-negotiate their existing professional identity (Day & Kington, 2008; van Veen & Sleegers, 2009).

When professional interests and changing professional practices confront each other, vocational teachers' work can be imbued with emotion, involving a range of dilemmas and a high degree of ambivalence (Lippke, 2012). The study of Woods and Jeffrey (2002) also revealed that many teachers face dilemmas (e.g. a wish to retain their old values vs. strong pressure to become a new person) when a reform fails to meet their existing professional interests and beliefs. On the other hand, when their existing professional identity is in accord with their new work practices, teachers will merely embrace the new socially expected identity. In this sense, even if teachers' professional identities are often challenged by changes (Day & Kington, 2008), the teachers may also be empowered through changing work contexts.

In addition to these empirical studies regarding teachers, the theoretical model of Kira and Balkin (2014) also includes the notion that the relationships between work and identity can vary, and that both subjugated and empowered identities can emerge from

work–identity encounters. In these relational situations, emotions, too, can emerge (Kira & Balkin, 2014).

The present study seeks to contribute to ongoing discussion on professional identity and its relation to work by focusing on the work and professional identity of vocational teachers. Thus, the research questions were framed as follows:

(1) What are the main elements of vocational teachers' work, as they themselves describe it?

(2) What relationships can be identified between the teachers' professional identity and these elements?

4. Methods

4.1. Data collection

This study was based on nine interviews with Finnish vocational teachers. To legally qualify as a teacher in upper secondary vocational education and teach vocational subjects (as in the case of the teachers interviewed in this study), one must have a Master's degree in the field concerned (or a lower degree, if a Master's degree is not awarded in that field). This is accompanied by pedagogical studies (60 credits), and a minimum of three years of work experience in the field. The teachers interviewed for this study were teaching in different study programmes within the field of technology and transport, and their participation in the study was voluntary. Nowadays, all study programmes last three years. They include at least 20 credits of workplace learning (equivalent to six months of study) out of a total of 120 credits.

As noted by Virtanen, Tynjälä, and Stenström (2008), Finnish students' learning practices, and the teachers' teaching practices, vary in different fields. In line with Mabry (2008), we considered that by focusing on a specific field through interviews, it

would be possible gain a deep understanding of possibly complex issues, and to draw relevant theoretical and practical implications, despite the limited size of our sample. Hence, for the purposes of the present study, we interviewed teachers working in the field of technology and transport.

The data collection procedure consisted of two phases. The first phase of the study was conducted in 2006. At this time, the aim was to gain information on teachers' work in a specific situation. Since then, many changes have been occurred in vocational education and training, including vocational skills demonstrations (VSD) (see Virtanen et al., 2008). The changing landscape of VET has been strongly bound up with the role of technology in education. It is clear that technology is constantly evolving, and is changing educational needs and practices (Hämäläinen, De Wever, Malin, & Cincinnato, 2015). The second phase of the study (2013) was conducted in order to illuminate how the work of vocational teachers had developed over seven years. More specifically, it was hoped that it would reveal how teachers experienced their work from the viewpoint of their professional identity. In practice, the first and second rounds of the interviews followed the same interview guidelines. The main themes were the vocational teachers' professional identity and work, the changes in their work, their work community, and their future prospects as a teacher. In both phases, the length of the interviews varied from 75 to 125 minutes.

The data for the first phase of the study were gathered from five vocational teachers working in the same vocational institution. These teachers (males) were between 44 and 53 years of age, and their teaching experience ranged from 5 to 25 years. The research was conducted in the context of an intensive educational reform. Consequently, the amount of students' workplace learning had increased from the

national minimum to 40–60 credits. The interviewed teachers were at the forefront of the implementation of the reform.

In the second phase of the study, we interviewed a different set of teachers. This was due, firstly, to the challenges of reaching the teachers from the first study, and secondly, because our aim did not require a follow-up study with the same persons. The teachers for the second phase were, however, selected from the same field, and their background profiles (e.g. work experience) were similar to the teachers interviewed previously. Altogether, four vocational teachers were interviewed. The teachers (two men and two women) were between 38 and 55 years of age, and their teaching experience ranged from 8 to 24 years. The research took place in a developing situation, in which vocational studies were increasingly occurring in new TEL settings – the aim was to enhance vocational learning and to respond to the needs of working life. The interviewed teachers had many years of experience of teaching in TEL settings.

4.2. Data analysis

The data analysis involved qualitative and quantitative content analysis (Hsieh & Shannon, 2005; Saldaña, 2013). The data were analysed via researcher triangulation (Saldaña, 2013). The processes of identifying the codes, coding teachers' expressions, and forming categorisations were carried out by the researchers working together. When there were inconsistencies, we negotiated a solution or an interpretation that was accepted by both authors.

With regard to the first research question (focusing on the main elements in the work), we started by reading and identifying the key expressions related to the teachers' actual work, including current work tasks, duties, and job descriptions. Thereafter, we arrived at a set of initial codes in accordance with our reading of the expressions. We then re-read the expressions and coded them; that is, we marked similar descriptions

(i.e. expressions encompassing similar professional duties and tasks) with a certain code. Afterwards, we grouped the codes under boarder categories. Through this process, the codes with similar expressions were grouped under the same category.

Overall, five main categories (i.e. elements) were found to illustrate the teachers' work: vocational teaching within the school, developmental work, technology-enhanced work, professional duties outside the school, and educational duties. To take an example, the category of professional duties included codes such as 'finding workplaces for students' learning', 'guiding, organising and evaluating students' learning in the workplace', and 'training workplace instructors'. For each main category, we used quantitative content analysis to count how many teachers discussed each element of the work. We also addressed the similarities and differences between the teachers' descriptions of their work in 2006 and 2013. The only major difference was that the element denoting technology-enhanced work emerged only in the later set of interviews.

In relation to the second research question (the relationships between the teachers' professional identity and the elements discovered), we used two theoretical constructs – viewed as components of professional identity – as analytical frames, namely (a) *professional commitments*, and (b) *competencies*. Using these frames, we conducted a data-driven content analysis. Thus, we first identified how the two components of professional identity were related to each element of the vocational teachers' work, extracting the relevant accounts from the transcripts. We were able to identify broadly as harmonious or tensioned relationships. The relationship was designated as *harmonious* when teachers' professional commitments and professional competencies were supported or advanced by their work. The relationship was designated as *tensioned* when the teachers' professional competencies and commitments were threatened at their work. To take an example, we identified a tensioned

relationship between developmental work and the teacher's professional commitment from the following extract: "All these damned project meetings and developmental seminars absorb a great deal of teaching time. In this kind of situation I've sometimes asked myself, 'what is the main responsibility of teachers?' And of course it's teaching, but nowadays you can't focus on teaching when you have other duties that take half of your working time."

Secondly, we counted how often these relationships emerged in the teachers' interviews. To do this, we counted how many teachers described harmonious and tensioned relationships with their work including each described element, in isolation from the perspective of professional commitments and competencies. Afterwards, taking each element of the teachers' work in turn, we counted how many teachers described the relationship as tensioned or harmonious, from the perspectives of (a) professional commitments, and (b) competencies. Thus, we arrived at frequencies for *numbers of participants.* In both data sets, the manifestations of the relationships were similar, but the relationships between the teachers' professional identity and technology-enhanced work emerged only in the Phase 2 interviews.

5. Findings

The following five sections report the main findings (see Table 1). In each section, we first describe one element of the teachers' work and then illustrate how it was related to the teachers' professional identity. Professional identity was viewed as consisting of two components, namely professional commitments and competencies. We start with the construct referred to as vocational teaching within the school. Note that it was only with regard to vocational teaching that all the teachers reported a harmonious relationship between their work and their professional identity. We then continue with the other elements of the vocational teachers' work. Finally, we describe the fifth

element named as educational duties within the school. Here, the teachers reported only a tensioned relationship between this element of their work and their professional identity.

---- Insert table 1 about here ---

5.1. Vocational teaching within the school in relation to professional identity

All nine vocational teachers reported vocational teaching within the school as an element of their work. In particular, this work included professional duties relating to teaching theoretical knowledge and competencies specific to the vocational field. The teaching of theory and practice occurred both in classrooms and in workspaces at the school. Furthermore, the teachers said that their vocational teaching included coaching students on workplace learning periods, in order to equip them with the professional skills they would need at the workplace. According to the teachers, this coaching was guided both by the curriculum and by the specific workplace requirements. In addition to their actual teaching tasks, the teachers specified that their work included the various tasks involved in designing and preparing teaching. Below, we describe how the relationships between vocational teaching and the teachers' professional identity were found to be harmonious more often than tensioned.

5.1.1. A harmonious relationship between vocational teaching and identity

A harmonious relationship between vocational teaching and the teachers' professional identity emerged, insofar as all nine teachers described a balanced relationship between the vocational teaching at the school and their *professional commitments*. The teachers made it clear that their most important and meaningful responsibilities were related to generating the students' motivation to learn, and to teaching basic vocational competencies (both in practice and theory) at the school. As one teacher put it:

> Basic skills for work are taught here in the vocational school. It's my core task in this job. Teaching basic vocational skills is why we're here. There's no time to teach them in working life.

The teachers' identity commitments were expressed successfully when they were able to manifest their professional interests in their teaching, and to support the professional development and success of the students as professionals. The teachers also evaluated the students' professional development at the school as very effective. For example, compared to the learning spaces in hectic working life, the students had much more time for learning at the school, including conducting experiments and learning from errors. The teaching duties at the school were experienced as rewarding, and they provided emotional experiences, such as joy, for the teachers. This emerged especially in situations where the teachers witnessed their students' development from novices to expert professionals.

Seven teachers also reported a harmonious relationship between vocational teaching and their *professional competencies*. The main reason for this harmonious relationship was that their years of experience had given them advanced professional competencies for teaching the students. For example, they could recognise the students' individual ways of learning, which they saw as a vital competence for planning and implementing the teaching, and for supporting the students' learning. Furthermore, they had good field-specific competencies relating to the content of the teaching.

5.1.2. A tensioned relationship between vocational teaching and identity

Although the vocational teachers' professional identities appeared to be mostly harmonious in respect of vocational teaching, some tensions emerged. First of all, there were instances of a tensioned relationship with regard to *professional competencies*. According to four teachers, the students' vocational competencies had declined

significantly, with huge differences in the students' preparedness and skills. This meant that the teachers had to teach heterogeneous groups of students, including those with low vocational skills and knowledge. To some extent, the teachers felt they had insufficient competencies for motivating the students and for teaching such heterogeneous groups of students. One teacher reported the emotional experience of inadequacy:

> Probably one of the biggest challenges is the composition of the students. When it's so heterogeneous, it's really hard to reach a consensus and compromise on how to proceed. In that sense, you feel incredibly inadequate professionally all the time, because you know you can't focus properly on any student. It's not a good option for anyone.

In this kind of situation, the teachers wished that they were more competent in teaching heterogeneous groups. They also hoped for more opportunities to develop their know-how in the vocational field, to enhance the effectiveness of their teaching.

Furthermore, four teachers reported that their *professional commitments* were challenged, since they experienced vocational teaching at the school as frustrating, demanding, and taxing on their well-being. A particular reason for this was that there were students without ambitions to learn, and with poor basic skills. This created a situation in which the teachers were unable to focus properly on the vocational teaching. Instead, teachers had to teach knowledge and skills which the students should have learned at their comprehensive school. When there was a lack of time for actual teaching, and when the teachers were unable to teach each vocational issue in depth, they became frustrated, stressed, and irritated.

5.2. Developmental work as a part of teaching in relation to professional identity

Seven vocational teachers described developmental work as an essential part of their vocational teaching. In practice, developmental work was defined as projects aimed at developing vocational education and training (including developmental work on the curriculum) and as a commitment to developing educational practices through self-directed activities. Below, we describe how the relationships between developmental work and the teachers' identity were elaborated fairly equally as harmonious and tensioned.

5.2.1. A harmonious relationship between developmental work and identity

A harmonious relationship between work and professional identity emerged in the case of six teachers, whose *professional commitments* involved developmental work. The advancement of developmental projects was seen as helpful for breaking down routines and considering novel ideas for teaching. The teachers took the view that 'variety is the spice of work', in terms of developmental work as part of their teaching. When the required developmental tasks were in balance with professional interests and other duties, the teachers were satisfied:

> I actually worked on one such project for several years. It was related to guidance for students' workplace learning. I think it was really interesting, at least in this case. In particular, the cooperation with the project manager was really good. I was able to carry out this IT guidance and try out new things, and I received a lot of support.

However, the teachers mentioned that it required time and individual effort to find the right balance between developmental work and teaching. In finding this optimal balance, it is important that teachers should have the possibility to modify and engage in

the developmental work according to their individual interests and competencies, and to control the amount of developmental work.

5.2.2. A tensioned relationship between developmental work and identity

Five teachers identified the relationship between work and professional identity as tensioned from the perspective of *professional commitments*. The challenge was that it took too much time away from their teaching, i.e. their primary work. Overall, the teachers experienced the teaching of vocational skills as the core element of their commitments, and they indicated that developmental work should primarily support this teaching, rather than taking time from it.

Furthermore, the teachers were, at least to some extent, exhausted by the developmental work. They also indicated that their commitments were tensioned because there were too many duties in the 'grey area' (the combination of developmental and other work), without adequate support and time:

> Then there is the fact that in work you have something [related to developmental work] that stays sort of in the 'grey area'… things they don't factor into the working hours. And we have tackled that and started following the exact hours. What and how long it takes to do something should be estimated better.

The teachers also discussed their experiences of irritation due to the limited opportunities to exert influence, and to inoperative development practices.

5.3. Technology-enhanced work in relation to professional identity

In Phase 2 of the study, all four teachers shared the view that there was an increasing need for technology-enhanced teaching practices. They emphasised that the emergent use of technology as part of 21st century skills, with the potential to enhance students' learning and professional development, had become an essential part of their work. The

teachers also mentioned that the need and possibilities for TEL (e.g. using skype to interact with students during their fieldwork or student exchange abroad) were greater than before. Below, we discuss how both harmonious and tensioned relationships emerged equally in technology-enhanced work, in relation to the teachers' identity.

5.3.1. A harmonious relationship between technology-enhanced work and identity

In Phase 2, all four teachers indicated that their *professional commitments* were enhanced by the increase in technology-enhanced work. They emphasised the importance of using technological tools in their work. For example, one teacher indicated feelings of joy associated with embedding technologies within the teaching:

> Then we have smart boards and this type of basic technology in the classrooms, and students use their mobile phones and other devices. So, I enjoy this technology and try to challenge people here with all kinds of things we could use.

The teachers described one distinctive feature of this transformation in the work as the close link between their professional work practices and technological inventions. One of the teachers also elaborated that she did not want to produce ready-made learning materials for the students, and highlighted that technological possibilities allow teachers to produce and influence the learning materials.

The four Phase 2 teachers also indicated that the new TEL environments provided a foundation for transforming teachers' expertise. They highlighted the importance of benefiting from the learning opportunities gained through technologies, and the possibilities for developing their own teaching practices. This illustrates a harmonious relationship between the teachers' professional identity and technology-enhanced work from the viewpoint of *professional competencies*. The teachers also felt that the technologies enabled them to devise new ways of working in order to solve

problems. The technologies were seen as creating the potential for developing novel teaching practices:

> They're used these days, and I think they should be. It's a pleasure to use tools that are utilised at all levels of information and communications technology. It was probably the first time that I replaced the second visit for workplace learning with a video call. It's frustrating to drive to Viitasaari [a town] for some 20-minute session, when you can easily do the same thing from here.

5.3.2. A tensioned relationship between technology-enhanced work and identity

Despite being advanced in the use of the technologies, all four teachers (Phase 2) reported that having more technology-enhanced work posed challenges to their *professional competencies*. They described a need to change their working practices, since their pedagogical practices and thinking had largely remained unchanged in the new work context:

> When I write something in Facebook, it takes only a couple of seconds for the first person to answer. You still don't realise that everyone has it on their mobile phone. I'm not following everything quite yet. In a way, it should be thought of like that… I still think about it computer-wise. Now, this is the mobile era.

The teachers also indicated that the work environment and lack of organisational resources (involving e.g. a lack of technological resources) impeded TEL. The teachers were particularly unhappy about clumsy, unhelpful, and time-consuming technologies. They were fearful that their workplaces might not provide truly functional technological resources for them in the future:

> I have fears for the time when we adopt this official system which is web-based, where you have a pull-down menu for each student, and you choose a number for each hour. You can spend 5 to 10 minutes per teaching session on that. Then, probably, proficiency tests, workplace learning, and so on, will cause the most work. Registering those takes several minutes. And when you have a big group, it

takes time, and the margin of error increases. When the system doesn't guide your work or action very much, you have to check different things several times to get it all right.

These kinds of expressions illustrate how the teachers predicted the future directions of their work. These directions could harm their activities, through technology that had poor usability and lacked added value. Some teachers also indicated that they would need more time and continuing education to be able to fully take advantage of the new technologies in their teaching.

5.4. Professional duties outside the school in relation to professional identity

All nine vocational teachers highlighted that their professional duties *outside* the school were part of their work, and that this kind of outside work had increased during recent years. The outside duties were largely related to the students' workplace learning, in terms of organising, guiding, and evaluating their learning, in collaboration with workplace personnel. Before the students' workplace learning periods could begin, the teachers had to find suitable workplaces for the students. The increased professional duties outside the school also meant that the teachers had to guide and train workplace trainers – that is, workers who would look after the students within the workplace during their workplace learning – so that they would be able to guide the students' professional development in appropriate ways, and in accordance with the curriculum. In the case of the *vocational skills demonstrations* (VSD) and its evaluation, the teachers also reported a need to coach the workplace trainers on performing the role of evaluators.

For the most part, we found a tensioned relationship between the vocational teachers' duties outside the school and their professional identity (see below), even if there were also some aspects denoting a harmonious relationship.

5.4.1. A tensioned relationship between professional duties outside the school and identity

A tensioned relationship emerged when the *professional commitments* of six teachers were connected to vocational teaching, but they were increasingly required to carry out duties outside the school. Although these teachers understood the importance of working with workplaces, and the pivotal role of students' learning outside the school, the teachers were deeply unhappy about the notion that their work and the students' learning would increasingly move away from the school and into the workplace. They considered that students' competencies could be narrowed if they were to learn only specific skills relating to a particular workplace.

The interviewees also emphasised the role of teachers as professional experts regarding the curriculum, although they were aware that their viewpoint was not in line with new work settings. In this regard, new evaluation practices led to annoyance:

> Somehow, this demand for documentation and an evaluation process, and the complexity of it, have gone too far. I think it's related to proficiency tests, which have to be evaluated anyway. I think it's really hard. I also find it quite amusing that people, these workplace learning trainers, who've never even looked at the basics of the curriculum and don't know it, are evaluators… I feel this is totally absurd.

According to these teachers, it was also challenging to match their own tasks to the conditions and timetables of the workplaces, and to arrange official guidance with workplace trainers, who do not always have time and enthusiasm. Furthermore, the workplaces were often far away from the school, and time had to be spent on travelling instead of guiding and evaluating the students at the workplaces.

Five teachers also experienced a tensioned relationship between duties outside the school and their professional identity, from the perspective of their *professional competencies*. The work, which included guiding both students and workplace trainers, posed particular demands on the teachers' guidance skills, including feedback practices. One teacher experienced a need to develop his guidance skills so that he could determine whether the students had problems in the workplaces and needed his support. Another teacher reported inadequate competencies with regard to modern technology and new appliances in the workplace. This complicated the guidance and evaluation practices in working life.

5.4.2. A harmonious relationship between professional duties outside the school and identity

Three teachers perceived a harmonious relationship between their decreased work tasks at the school and their *professional commitments*. Their professional interests and views on the students' learning were in the line with the increased focus on work tasks and learning outside the school. One teacher indicated the positives in learning outside the school, from the viewpoint of both teachers and students:

> An optimal way of learning would be that much would be done in the workplaces. It would make our job easier, plus performing actual tasks would probably give the students much more than learning within the school… Now we have twenty study weeks in the workplace, this is the minimum amount of the students' workplace learning. They try to increase it all the time. It would be good to have more of it.

In addition, four teachers reported that they had good skills relative to the vocational field and to knowledge of workplaces in the field. These competencies created a foundation for increased collaboration with working life. This collaboration was further experienced as an arena for developing field-specific skills. All of these

elements illustrate a harmonious relationship between having work increasingly conducted outside the school and the teachers' *professional competencies*.

5.5. *Educational duties within the school in relation to professional identity*

Altogether, seven teachers reported that increased educational duties constituted one element of the work. According to these teachers, their educational tasks encompassed teaching social skills (e.g. how to greet other people), with attention to manners and life values. Thus, the teachers tutored students on the importance of going to work and school at the right time, remaining at work for the required time, and doing their homework as requested. The teachers experienced a constant increase in this educational element of their work, due to students' problems at home, and to many challenges with respect to students' behaviour and attitude (involving a lack of initiative and social skills, increased behavioural disturbances, and a lack of interest in studying). All in all, we found only a tensioned relationship between teachers' teaching duties within the school and their professional identity, as shown below.

5.1.1. *A tensioned relationship between educational duties within the school and identity*

A tensioned relationship with regard to the element of educational duties emerged, insofar as the vocational teachers had *professional commitments* connected to vocational teaching, but were increasingly expected to take care of and educate students in ways that were not truly vocational. In fact, five teachers said that although they did not want to focus on (non-vocational) education, which included getting involved in students' disruptive conduct and in teaching basic social skills, they were forced to spend time and effort on these aspects. They felt frustrated and irritated when they were unable to concentrate on vocational teaching. One teacher described this as follows:

I want to teach young people a new vocation. It's nice to see when a guy learns new things and then gets a grip on a job. However, during the first year, it's sort of about discipline and educating. The second and third years involve the actual subject: teaching a vocation… I'm just annoyed that it's a waste of time to do such things during the first year. I'd rather start talking about materials and machines instead of talking about when you're supposed to come to the school and do the tasks. It's this type of shepherding, just like little kids… The situation is totally different as compared to twenty years ago.

In addition to challenged identity commitments, we identified a lack of *professional competencies*. Six teachers reported a lack of educational competencies, and a need for knowledge of human nature in order to get along better with the students, plus knowledge of how to intervene in students' problems and support them proactively. The teachers also indicated that it was really demanding to deal with and support challenging students, without at the same time ignoring the other students and their learning. Educating in this domain, and managing difficult situations (e.g. the students' continuous late-coming and inappropriate behaviour) tested the teachers' patience and skills.

6. Discussion

Regarding the first research question, the study showed that vocational teachers' work encompasses a range of tasks. The main elements of their work were (i) vocational teaching within the school, (ii) developmental work as a part of vocational teaching, (iii) technology-enhanced work, (iv) professional duties outside the school, and (v) educational duties within the school. In a similar manner, studies in different countries have drawn attention to the responsibilities of vocational teachers regarding professional duties outside the school (Fejes & Köpsén, 2014; Isopahkala-Bouret, 2010), coaching and physiological counselling (Ketelaar et al., 2012), and ICT expertise

(Atwell, 2011). The findings also revealed a difference between the groups interviewed at the two stages. Thus, in the Phase 2 interviews the teachers identified *technology-enhanced work,* as an additional and emerging element, while those interviewed in Phase 1 did not describe their work as technology-enhanced.

From the findings, one can gain a general overview of the emergent trends in vocational teachers' work, including notably increases in technology-enhanced duties and educational responsibilities (e.g. caring), along with decreased time for teaching in the school. The present study indicated that the transformed curriculum has shaped the work of teachers, for example, with regard to the increasing proportion of students' learning within the workplace, and the need for teachers' work practices to be adapted accordingly. However, changing educational practices are not the only factors modifying teachers' work, since technological developments, and students with individual needs, now play a significant role in this regard (see also Kirpal, 2011).

The findings for the second research question showed the relationships (harmonious and tensioned) that act between the five main elements of the vocational teachers' work and their professional identity. In line with Pillen et al. (2013), whose study focused on novice teachers' identity, the present study indicated that tensions emerged, particularly when experienced teachers were unable to focus on the desired professional tasks, and had a sense of themselves as lacking in competence.

A tensioned relationship (including negative emotions, such as frustration) emerged especially when the teachers were expected to care for students and to provide forms of education beyond their core professional interests and skills. Conversely, the most positive experiences and emotions, such as joy, emerged from opportunities to focus on actual vocational teaching within the school. However, the need to perform diverse professional duties and responsibilities took resources and time away from

vocational teaching. Furthermore, both tensioned and harmonious relationships emerged, for example, in association with increased technology-enhanced work. The teachers were excited about the new technologies, but problems in using these efficiently caused uneasiness.

7. Conclusions

The present study sheds light on the relationships between vocational teachers' professional identity (with its various components) and work. In line with the theoretical notions of Kira and Balkin (2014), we found empirical evidence that the relationships between work and professional identity vary between professionals. In interpreting these findings, one must take into account that they emerged from a relatively small number of interviews carried out in specific temporal and contextual situations. One must also bear in mind that the conclusions may not be transferable to vocational teachers working in other fields. Despite these caveats, we suggest that recognition of the nuanced nature of the relationship between professional identity and work is valuable in efforts to promote teachers' professional development. The present study leads us to suggest the following as practical recommendations.

First of all, teachers need social support and arenas (e.g. mentoring, coaching) for their professional identity work. This could help them to make sense of their changing work environment and themselves (including an understanding of their own goals and skills), and to create balanced relationships between their changing work and their identity (Vähäsantanen, Hökkä, Paloniemi, Herranen & Eteläpelto, 2017). Activities in this domain can be conceptualised as manifesting *identity agency* (Ruohotie-Lyhty & Moate, 2016), and they can bring about changes in teachers' practices (Philpott & Oates, 2017). Social affordances for identity work, together with individuals' agentic actions, could forestall negative outcomes, bearing in mind that a

tensioned relationship between work and identity can be harmful to a person's well-being, commitment, and job performance (Cort, 2011; Kira & Balkin, 2014). When teachers find a balanced relationship between their identity and work, they will also be better able to take an active role in implementing new educational practices.

Secondly, it seems that vocational teachers need support and resources for developing their professional competencies, knowledge, and skills. In line with our findings, Taajamo (2014) reported that among Finnish vocational teachers, the three most urgent needs for professional development involve teaching students with special needs, developing their own ICT skills, and developing better classroom management skills to cope with students' behaviour. Our own findings lead us to suggest that teachers need competencies to educate students – in the broadest sense of the word – and to manage students with specific learning or social needs.

Furthermore, today's educational contexts are constantly changing through the use of technology (e.g. Atwell, 2011). New technologies do create new possibilities for teachers, but – as shown in this study – technology poses problems even for teachers who are used to implementing technology-enhanced teaching practices. It is important to note the opportunities given by new technologies to support vocational teachers' own professional development (see also Hämäläinen & Vähäsantanen, 2011). As pointed out by Brookshire, Lybarger, and Keane (2011) learning technologies may give the teachers more flexibility and control over their own professional learning. It provides possibilities to learn anytime and anywhere, and be able to adapt learning materials to support their own learning needs.

In line with other studies (e.g. Isopahkala-Bouret 2010), our findings highlight the fact that the teachers experienced the organisation and assessment of students' learning and vocational skills demonstrations as challenging and time-consuming. One

point to emerge was that it takes much more time to guide and evaluate individual students at workplaces than to instruct many students in classrooms, simultaneously. It was also felt that the curriculum materials and evaluation structures did not match the reality in the workplaces. In the future, new technologies may provide aids for the arrangements and assessment of workplace learning, so that the vocational curricula can be put better into practice. Promising experiences have been reported concerning the use of mobile tools in crossing the boundary between schools and workplaces (Cattaneo & Aprea, 2014; Hämäläinen & Cattaneo, 2015); for example, authentic and even real-time video material can be used to bring workplace learning situations into the classroom, allowing observation and discussion of the actual learning processes that occur in the workplace.

In a period of changing work settings and practices, it will be beneficial to develop innovative technological and pedagogical tools, plus novel curricular solutions to support vocational teachers' work and professional development. For example, with the help of artificial intelligence (AI) and machine learning algorithms, technologies can aid teachers' decision-making in technology-enhanced school and educational settings (Hämäläinen, Lanz, & Koskinen, 2017). In practise, AI may be used to develop computational modelling of education.

Although our study did not actually focus on vocational teachers' emotions, we noticed that their descriptions of the relationships between their work and identity included some expressions of emotion (indicating e.g. joy, satisfaction, and frustration). Such observations imply that the relationship between work and professional identity should be understood as imbued with emotion (see also Kira & Balkin 2014). Along similar lines, other authors have pointed out the importance of exploring both individual

aspects (teacher identity) and social aspects (the environment, the students) to elaborate teachers' lives as emotional experiences (Cross & Hong, 2012; Lippke, 2012).

References

Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education, 27*(2), 308–319.

Arvaja, M. (2016). Building teacher identity through the process of positioning. *Teaching and Teacher Education, 59*, 392–402

Atwell, G. (2011). Using technologies for teaching and training – The challenges of training trainers in the UK. In S. Kirpal (Ed.), *National pathways and European dimensions of trainers' professional development* (pp. 66–80). Frankfurt am Main: Peter Lang GmbH.

Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education, 20*(2), 107–128.

Beijaard, D., Verloop, N., & Vermunt, J. D. (2000). Teachers' perceptions of professional identity: An exploratory study from a personal knowledge perspective. *Teaching and Teacher Education, 16*(7), 749–764.

Billett, S. (2014). The standing of vocational education: sources of its societal esteem and implications for its enactment. *Journal of Vocational Education and Training, 66*(1), 1–21.

Brookshire, R. G., Lybarger, K. M., & Keane, L. B. (2011). Virtual workplace learning: promises met? In M. Malloch, L. Cairns, K. Evans & B. O'Connor (Eds), *The SAGE handbook of workplace learning* (pp. 331–340). Los Angeles, CA: SAGE.

Cattaneo, A., & Aprea, C. (2014). Using technologies to integrate vocational learning in multiple contexts. In V. C. X. Wang (Ed.), *Handbook of research on education and technology in a changing society* (pp. 675–690). Hershey: IGI-Global.

Cort, P. (2011). Trends in VET teaching and training: Teachers' perceptions of change and implications for teaching practice in Denmark. In S. Kirpal (Ed.), *National pathways and European dimensions of trainers' professional development* (pp. 45–62). Frankfurt am Main: Peter Lang GmbH.

Cross, D. I., & Hong, Ji. Y. (2012). An ecological examination of teachers' emotions in the school context. *Teaching and Teacher Education, 28*(7), 957–967.

Davey, R. (2013). *The professional identity of teacher educators: Career on the cusp?* London: Routledge.

Day, C., & Kington, A. (2008). Identity, well-being and effectiveness: The emotional contexts of teaching. *Pedagogy, Culture and Society, 16*(1), 7–23.

Farnsworth, V., & Higham, J. (2012). Teachers who teach their practice: The modulation of hybridised professional teacher identities in work-related educational programmes in Canada. *Journal of Education and Work, 25*(4), 473–505.

Fejes, A., & Köpsén, S. (2014). Vocational teachers' identity formation through boundary crossing. *Journal of Education and Work, 27*(3), 265–283.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*, 1277–1288.

Hämäläinen, R., & Cattaneo, A. (2015). New TEL environments for vocational education – Teacher's instructional perspective. *Vocations and Learning, 8*(2), 135–157.

Hämäläinen, R., & De Wever, B. (2013). Vocational education approach: New TEL settings – New prospects for teachers' instructional activities? *International Journal of Computer-Supported Collaborative Learning, 8*(3), 271–291.

Hämäläinen, R., De Wever, B., Malin, A., & Cincinnato, S. (2015). Education and working life: VET adults' problem-solving skills in technology-rich environments. *Computers & Education*, 88, 38-47.

Hämäläinen, R., Lanz, M., & Koskinen, K. T. (2018). Collaborative systems and environments for future working Life: Towards the integration of workers, systems and manufacturing environments. In C. Harteis (Ed.), *The impact of digitalization in the workplace: An educational view* (pp. 25–38). Cham: Springer.

Hämäläinen, R., & Vähäsantanen, K. (2011). Theoretical and pedagogical perspectives on orchestrating creativity and collaborative learning. *Educational Research Review, 6*(3), 169–184.

Isopahkala-Bouret, U. (2010). Vocational teachers between educational institutions and workplaces. *European Educational Research Journal, 9*(2), 220–231.

Ketelaar, E., Beijaard, D., Boshuizen, H. P. A., & den Brok, J. (2012). Teachers' positioning towards an educational innovation in the light of ownership, sense-making and agency. *Teaching and Teacher Education, 28*(2), 273–282.

Kira, M., & Balkin, D. B. (2014). Interactions between work and identities: Thriving, withering or redefining the self? *Human Resource Management Review, 24*, 131–143.

Kirpal, S. (2011). Emerging roles and competence requirements of teaching and training practitioners – A European perspective. In S. Kirpal (Ed.), *National pathways and European dimensions of trainers' professional development* (pp. 27–44). Frankfurt am Main: Peter Lang GmbH.

Köpsén, S. (2014). How vocational teachers describe their vocational teacher identity. *Journal of Vocational Education & Training, 66*(2), 194–211.

Labone, E., & Long, J. (2016). Features of effective professional learning: A case study of the implementation of a system-based professional learning model. *Professional Development in Education, 42*(1), 54–77.

Lippke, L. (2012). Who am I supposed to let down?: The caring work and emotional practices of vocational educational training teachers working with potential drop-out students. *Journal of Workplace Learning, 24*(7/8), 461–472.

Mabry, L. (2008). Case study in social research. In P. Alasuutari, P. Bickman & J. Brannen (Eds.), *The SAGE handbook of social research methods* (pp. 215–227). London: Sage.

Motta, E., Boldrini, E., & Cattaneo, A. (2013). Technologies to 'bridge the gap' among learning contexts in vocational training. In P. M. Pumilia-Gnarini, E. Favaron, E. Pacetti, J. Bishop & L. Guerra (Eds.), *Handbook of research on didactic strategies and technologies for education: Incorporating advancements* (pp. 247–265). Hershey, PA: IGI Global.

Philpott, C., & Oates, C. (2017). Teacher agency and professional learning communities: What can Learning Rounds in Scotland teach us? *Professional Development in Education, 43*(3), 318–333.

Pietarinen, J., Pyhältö, K., & Soini, T. (2016). Teachers' professional agency – relational approach to teacher learning. *Learning: Research and Practice, 2*(2), 112–129.

Pillen, M., Beijaard, D., & den Brok, P. (2013). Tensions in beginning teachers' professional identity development, accompanying feelings and coping strategies. *European Journal of Teacher Education, 36*(2), 240–260.

Ruohotie-Lyhty, M., & Moate, J. (2016). Who and how? Preservice teachers as active agents developing professional identities. *Teaching and Teacher Education, 55*, 318–327.

Saldaña, J. (2013). T*he coding manual for qualitative researchers.* London: Sage.

Tao, J., & Gao, X. (2017). Teacher agency and identity commitment in curricular reform. *Teaching and Teacher Education, 63*, 346–355.

Taajamo, M. (2014). *Mobility among Finnish VET teachers and their skill requirements*. Paper presented at the ECER2014 Conference, Porto, September 2–5.

van Lankveld, T., Schoonenboom, J., Volman, M., Croiset, G., & Beishuizen, J. (2016). Developing a teacher identity in the university context: A systematic review of the literature. *Higher Education Research and Development, 36*(2), 325–342.

van Veen, K., & Sleegers, P. (2009). Teachers' emotions in a context of reforms: to a deeper understanding of teachers and reform. In P. Schutz & M. Zembylas (Eds.), *Advances in teacher emotion research: The impact on teachers' lives* (pp. 233–252). New York: Springer.

Virtanen, A., Tynjälä, P., & Stenström, M.-L. (2008). Field-specific educational practices as a source for students' vocational identity formation. In S. Billett, C. Harteis & A. Eteläpelto (Eds.), *Emerging perspectives of workplace learning* (pp. 19–34). Rotterdam: Sense.

Vähäsantanen, K. (2015). Professional agency in the stream of change: Understanding educational change and teachers' professional identities. *Teaching and Teacher Education, 47*, 1–12.

Vähäsantanen, K., Hökkä, P., Paloniemi, S., Herranen, S., & Eteläpelto, A. (2017). Professional learning and agency in an identity coaching programme. *Professional Development in Education*, 43(4), 514–536.

Woods, P., & Jeffrey, B. (2002). The reconstruction of primary teachers' identities. *British Journal of Sociology of Education, 23*(1), 89–106.

Table 1. Vocational teachers' work and its relationship to their professional identity (by number of participants).

Element of teachers' work	Relationships between work and professional identity
Vocational teaching within the school (n=9)	*Harmonious relationship (n=9)* – Tensioned relationship (n=6)
Developmental work as a part of teaching (n=7)	*Harmonious relationship (n=6)* – Tensioned relationship (n=5)
Technology-enhanced work (n=4)	*Harmonious relationship (n=4)* – *Tensioned relationship (n=4)*
Professional duties outside the school (n=9)	Harmonious relationship (n=5) – *Tensioned relationship (n=9)*
Educational duties within the school (n=7)	*Tensioned relationship (n=7)*