

Teacher, Professional or Both? A Mixed Method Study of the Professional Identity of Vocational Teachers and Trainers in Hungary

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Abstract

Purpose: Vocational educators in many countries enter teaching as a second career and authentic occupational expertise is seen as essential to good quality VET. The changing contexts of VET and the growing diversity of its learning populations also demand the development of teaching expertise. This dual professionalism is related to a unique combination of an occupational and a teacher identity, however, prior, and mainly qualitative research from a limited number of VET contexts suggests that often one side of this duality prevails. Our study aimed to explore the professional identity of vocational educators in Hungary and to identify some of the factors that might influence its formation.

Methods: We applied a mixed method design, conducting a teacher survey (N=138) and semi-structured interviews (N=12). The quantitative and qualitative strands followed a parallel design, exploring the same topics but identity views and the organisational context were studied more deeply in the interviews. In the survey, we measured professional identity through a direct question about its type as well as questions about the importance of specific goals and teacher competence areas in vocational teaching. We used statistical and thematic analyses to study our quantitative and qualitative data.

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Results: Most vocational educators in our study identified as both a teacher and a professional, though the type of identity varied by gender and length of occupational work experience. Perceptions about the main goals in teaching revealed vocation/outcome-focused and student/education-focused goal orientations influenced by gender, qualifications and work experience, while our qualitative data also showed the impact of school culture and the wider socio-economic context. The goal orientations identified in the survey were more balanced for those with a dual identity, and they correlated with perceptions about the importance of different teacher competence areas, which were most influenced by whether or not the educator had obtained a pedagogical qualification.

Conclusion: Our findings showed that although most vocational educators also in Hungary claim to have a dual identity, they often prioritise the development of occupational expertise as they believe it is what gives them credibility that is seen as essential to "good VET". Considering the significant impact we have found of teacher education and continued work in the occupation on identity views, it seems of utmost importance that policy and schools recognise and support the development of both occupational and teacher expertise, to ensure a balanced dual identity that seems best suited for vocational teaching.

Keywords: Vocational Teachers, Professional Identity, Dual Identity, Dual Professionalism, Teacher Competence, Vocational Education and Training, VET

1 Introduction

Vocational educators in many countries typically enter the teaching profession as a second career, after having worked for some time in the vocation they teach. Indeed, work experience is often a precondition of their employment, while a teacher qualification or a higher education degree is not, especially if they teach only vocational practical subjects (Cedefop, 2016; Misra, 2011). Once they start teaching, vocational educators typically do not lose commitment to their original profession, rather, their teaching practice and professional development are shaped by their vocational expertise and a sense of "belonging" to their original profession (Orr, 2019). Beyond prior work experience, maintaining industry currency, ideally through constant boundary crossings between the practices of the occupation and VET is considered essential to high-quality VET (Andersson & Köpsén, 2019; Broad, 2015, 2019; Fejes & Köpsén, 2014). On the other hand, teaching is more than a mere transmission of knowledge, and the diverse and changing contexts of VET and the growing diversity of its learner populations require vocational educators to obtain and continuously develop pedagogical and didactical competences as well (Orr, 2019; Wheelahan & Moodie, 2011).

The ideas described above are commonly referred to by the concepts of *dual identity* and *dual professionalism*. Previous, still relatively scarce research on this topic shows, however, that it is not easy to develop and maintain this dual identity and practice dual professionalism. Depending on local policy measures and organisational conditions, maintaining industry currency or developing pedagogical/didactical competences may be prioritised by the vocational educators themselves and/or primarily expected and supported by their school and national policy and legislation (Antera, 2022; Broad, 2016; Fejes & Köpsén, 2014; Robson, 1998; Schmidt, 2019; Tyler & Dymock, 2019).

Due to VET teacher shortage, quality concerns and increasing challenges, including the high number of low-achieving students from a disadvantaged social background that leads to high dropout rates (40% in some regions) and the lower prestige of VET compared to general education, the professional development of vocational educators is high on the policy agenda in Hungary. The latest VET strategy (Innovációs és Technológiai Minisztérium, 2019) reflects the idea of dual professionalism, expecting vocational educators to keep pace with the fast-paced technological changes in their occupational field, use digital teaching skills, master methods adequate for teaching generation "Z" and support disadvantaged students. There are, however, very little data and few research studies available about the professional career path and development of vocational educators in Hungary. We know even less about their understanding of their professional identity, which may significantly influence their motivations for and practice of professional development. Based on data from a mixed-method doctoral research study about VET teachers' professional development and learning (Bükki, 2022), this paper aims to explore this professional identity and identify some of the factors that might influence its formation.

2 Theoretical Background

While dual identity as some kind of combination of the original occupational identity and the new teacher identity is a widely used concept in the emerging body of literature about VET teachers (Orr, 2019; Zhou et al., 2022), it appears to have no one clear-cut definition. In fact, the broader concept of identity has many different meanings in the literature, and teacher professional identity has often been studied without giving a clear definition or studied using very different conceptualisations (Beijaard et al., 2004).

2.1 Teacher Professional Identity

Beijaard et al. (2000) studied teacher identity as deriving from the ways teachers see themselves as subject matter experts, pedagogical experts, didactical experts or some combination of these. Based on their quantitative data, they identified five groups, with "Subject matter

expert" being the most common. Their qualitative data suggested that teachers saw subject matter expertise as the basis for teacher authority and being taken seriously by students. They also measured the effect of teaching context, teaching experience and biography on identity perceptions. However, based on the scales they had created, they did not find any significant effect.

In their subsequent review paper, Beijaard and his colleagues (2004) already argued that such studies about the "characteristics of professional identity" should rather be put under a different heading and suggested that the essential features of teacher professional identity related to its dynamic and ever-developing nature: that it is an ongoing process of interpretation of experiences, influenced by both the person and the context, consisting of more or less core sub-identities that can be more or less harmonised but should not be in conflict, and involving agency in the process of professional development.

A similar conception of identity formation appears in Kelchtermans (1993, 2009). He proposed *professional self-understanding* and *subjective educational theory* as constituents of a personal interpretative framework that teachers develop throughout their careers. This operates as a lens through which teachers look at their job, give meaning to it and act in it, which is thus both the condition and outcome of reflective and meaningful interactions between the teacher and his/her job context. Kelchtermans describes *self-understanding* as consisting of five intertwined components: Self-image, self-esteem, task perception, job motivation and future perspective, while *subjective education theory* refers to personal systems of knowledge and beliefs about education. "Task perception" encompasses deeply held beliefs about what constitutes good education and serves as a personal professional "agenda" and guide for the ongoing "judgment making" in everyday teaching work and a personal norm for judging one's own effectiveness.

2.2 Vocational Educators' Dual Identity

The concept of vocational educators' *dual identity* is also closely related to professional development as suggested by its twin concept of *dual professionalism*, and it is likewise typically discussed in terms of vocational educators' perceptions about their tasks in teaching and the expertise required for doing "good VET". The literature comprises mostly small-scale qualitative studies based on interviews from a limited number of VET contexts (countries), typically focusing on occupational expertise and its development.

An early mention of this concept is in Robson's (1998) review study of post-secondary (further education or FE) vocational teachers in England. The majority of FE teachers gained occupational work experience prior to entering the teaching profession, which was consistently prioritised over teacher qualifications and pedagogical knowledge by policy-makers as well as the teachers themselves. They believed it provided them with the expertise and

credibility required for teaching, and retained and valued their original professional identity because they considered it as their task to socialise pupils into professional norms and practices. Robson found previous findings (Venables, 1967) still valid in that English vocational teachers did not see themselves as educators, and their dual identity in fact meant a dominance of their original occupational identity, while VET institutions provided neither incentives nor opportunities for the development of a teacher identity.

In a later study, Robson and her colleagues (2004) identified four main narratives of FE teachers' perceptions of their work and role in preparing learners for work (which they related to the three elements of professionalism: knowledge, autonomy and responsibility, Furlong et al., 2000): *Knowing why*, i.e., attributing great importance to deep knowledge, though only in terms of subject matter, rather than teaching; *adding value*, i.e., going beyond the syllabus as a manifest of their autonomy; *protecting standards* (of the industry); and *sharing expertise*. They argued that vocational teachers' identity was related to expertise, commitment and care for others and the development and well-being of the "whole person", though this was mostly for the interests of quality within the original occupation.

Köpsén (2014) had similar findings in Sweden where upper-secondary vocational teachers referred to their relationship with students and their "fostering" activities as distinctive features of their identity, different from that of general subject teachers. Her interviewees considered vocational subject knowledge to be essential for teaching, but just as important was the sociocultural knowledge of the vocation (rules and norms and ways of communication) as they saw it as their task to "bring the practise of work into the practise of education" (Köpsén, 2014, p. 208). They therefore considered vocational identity an asset and a prerequisite for teaching, although, as the author noted, citing Colley et al. (2003) approvingly, this vocational habitus might also risk "cementing" social class and gender aspects.

Due to the complex, tacit, situated and constantly changing nature of vocational knowledge as it is constantly developing in the practice of the occupation, maintaining industry currency is crucial and Broad (2015, 2016, 2019) argued that the only authentic way to do that is through constant "boundary crossing" between the practices of the occupation and VET. Her studies showed that vocational teachers in the United Kingdom (UK) believed this was essential to high-quality vocational pedagogy: It ensured their credibility in the eyes of their learners, enriched their professional conversations with "real life" examples, helped maintain their enthusiasm and gave them confidence in their professionalism. Not adequately supported by their school, these teachers acted with agency in finding opportunities to maintain links with the occupational practice, for example, by doing part-time jobs or participating in occupational associations.

Very similar findings about vocational educators' task perceptions and their "brokering" activities connecting the practices of the occupation and VET and "recontextualizing" vocational knowledge for vocational teaching were drawn in studies of Australian post-secondary

VET teachers, where policy-makers and VET institutions appeared to prioritize the development of vocational expertise (Moodie & Wheelahan, 2012; Smith & Yasukawa, 2017; Tyler & Dymock, 2019; Wheelahan, 2007).

Boundary crossing between the practices of VET and the prior occupation does not only provide industry currency but also helps maintain the original occupational identity. Fejes and Köpsén (2014) explored Swedish vocational teachers' identity formation through boundary crossings across the communities of practice (CoP) of teacher training, teaching and the prior occupation. They drew on Lave and Wenger's socio-cultural theory of learning (Lave & Wenger, 1991; Wenger, 1998) where professional identity is developed through participation in a CoP, by which one gains an understanding of the required tasks, professional values and traditions as well as the ways to act, talk and relate to others (Andersson et al., 2013). They found that teacher training had a strong influence on developing a teacher identity, but still, some educators construed strong occupational identity and considered themselves to be workers, not teachers. Fejes and Köpsén (2014) argued that only doing a part-time job in the prior occupation or other forms of constant boundary crossing can give vocational teachers credibility and legitimacy.

Antera (2022) explored the close connection between identity and competence in her study of Swedish vocational teachers. Her interviewees all claimed that a deep understanding of their prior occupation was the basis for their teaching and an innate interest was their driving force for remaining updated in it, which many felt was inadequately supported by their school. Nevertheless, all - except for novice teachers who showed a dual identity - identified primarily as teachers as they prioritised the social aspect of teaching, seeing the main goal of education as developing "nice people" first and then good professionals.

Quantitative and mixed method studies are rare in the literature. Sappa et al. (2019) explored the main challenges in the work of Swiss vocational educators and the protecting factors and found that working in another job besides teaching may positively influence resilience and well-being. Gustafson (2016) found that Canadian vocational teachers held a dual identity, but the teacher identity was embedded within the identity of the tradesperson and the process of reaching a negotiated new identity was affected by the views of others. Those who had participated in teacher training before becoming a teacher were more likely to see themselves as a teacher, but the length of teaching experience did not show a significant association with the type of identity. Gustafson's qualitative results suggested that vocational educators' teacher identity was already established within their prior trade practice as a result of their working with apprentices. However, this pre-existing teacher identity was not supported nor valued in the college setting and in their highly academic teacher training.

In our study, we built on Kelchtermans' (1993, 2009) model that understands teacher identity as professional self-understanding. We focused on two of its key elements which we found were most closely related to what previous research about vocational educators'

identity highlighted: Self-image (that is, if they see themselves as a professional, a teacher or both) and task perception (that is, how they understand their task as a vocational educator). Since this professional self-understanding is shaped by the continuous interpretation of experiences while participating in different communities of practice – an idea which we see as very similar to Beijaard and his colleagues' conceptualisation (2004) and also to the socio-cultural theory of learning (Lave & Wenger, 1991; Wenger 1998) – we studied how these elements of vocational educators' self-understanding are influenced by their educational background, teaching and work experience as well as the organisational context.

2.3 Context: VET and VET Teachers in Hungary

VET in Hungary is offered from age 14 in two types of VET programmes at upper secondary and upper and post-secondary level (Bükki, 2019):

- the lower level programmes (EQF 4), currently called *vocational school*, provide 3 years of VET and only limited general education as skilled workers' training and award (only) a vocational qualification that allows access to the labour market;
- the higher level programmes (EQF 4-5), currently called *technicum*, provide 5 years of combined VET and general education and award both a vocational qualification and the maturity certificate that allows access to higher education.

Initial VET thus partly overlaps with mandatory schooling (which is from age 3 to 16) and general education is part of all initial VET curricula: Its share is one third in vocational schools and 60% in the upper-secondary years of technicum, (Cedefop & Innovative Training Support Center Private Limited Company [IKK], 2022) and vocational educators made up only 35% of all VET educators (N=30,922) in 2018/2019 (Ministry of Human Capacities, 2019).

Despite several major reforms in the past decade, which aimed at increasing the attractiveness and quality of VET, including the promotion of a German-type "dual model" of apprenticeship training, the share of students studying in VET has continued to decrease (from 67% in 2012/2013 to 58% in 2022/2023 in the first year of upper secondary education). Especially in the lower level – and lower prestige – VET programmes, educators face multiple challenges: Many low-achieving students, often from disadvantaged social backgrounds and with poor basic skills and motivation. Dropout rates are high and student achievement very low in terms of key competences (literacy and maths) in many VET schools (Cedefop, 2017; Fehérvári, 2014; Varga, 2022).

Limited prior research suggests that most vocational educators also in Hungary entered teaching as a second career and many without any prior pedagogical training, although the

majority later obtained a vocational teacher or vocational trainer qualification – this was a legal requirement for those employed as a vocational teacher before the latest reform initiated by the VET strategy of 2019 (Bükki et al., 2016; Bükki, 2018, 2022). Legislation differentiates two profiles of vocational educators depending on what they teach, but currently, none of the profiles are required to obtain a pedagogical qualification:

- *Vocational teachers*, who can teach any vocational subjects and must have either a teacher qualification in the specific field, or at least a higher education degree related to the training content, or any type of higher education degree and a relevant vocational qualification;
- *Vocational trainers*, who can teach only practical subjects and are required to have only the maturity certificate, a relevant vocational qualification and at least five years of work experience.

Although the latest VET reform removed VET teachers (including those teaching general subjects) from the previously uniform teacher career model (Bükki et al., 2016), in-service training remained mandatory for them and the range of available (accredited) courses has been widened to include some further training in the vocation taught and even some in vocation-specific methodology. However, the shortage of vocational educators is a significant problem due to low salaries and social prestige, and the VET strategy of 2019 proposed to increase the involvement of practitioners from the industry in VET who are not required to have any pedagogical qualification neither to regularly participate in continuous professional development (CPD).

3 Research Questions

In our study we explored the professional identity views of vocational educators working in Hungarian VET schools. While we agree with the current conceptualisations of professional identity that it is not fixed but constantly evolving (Beijaard et al., 2004), we took a "snapshot" of these identity views, focusing on two key elements of Kelchtermans' (1993, 2009) concept of professional self-understanding: Self-image and task perception, and we studied the latter by exploring how vocational educators defined their goals in teaching and what competences they considered most important for it. We also examined if and how our selected factors – teacher profile, gender and educational background, work and teaching experience as evidence of participation in different types of communities of practice – influenced the formation of these identity views. Our research questions were:

- Do vocational educators in Hungary consider themselves professionals, educators or both?
- How do they perceive their main goals in teaching?
- What competences do they consider the most important in their teaching work?

4 Method

Our study used data collected in a doctoral research project about the professional development and learning of VET teachers in Hungary and the related individual and organisational level factors (Bükki, 2022). It applied a mixed-method design, combining an online survey and an interview study. The quantitative and qualitative strands followed a parallel or convergent design (Creswell & Clark, 2018), studying the same topics but the latter aimed to explore more deeply VET teachers' identity views and the organisational context.

The online survey was conducted in May-June 2019 in one vocational centre in the capital selected through convenience sampling (the centre had a research cooperation agreement with the university). This centre had 11 member schools that offered all types of VET programmes in 17 of the 23 occupational fields and included both high-performing and high-prestige as well as some low-performing schools (in terms of students' achievement at national measurements and exams). Though our sample was not statistically representative, the generalisability of our data is enhanced by the fact that its distribution by gender, age and type of training programme is close to that of the population of VET teachers in Hungary. It also covers a wide range of occupational fields, although the majority of respondents (64.4%) taught in the fields of wood industry, other services, construction, arts and sports. In our current study, we analysed responses to three questions from our online questionnaire that consisted of five blocks: demography and other background data; professional development and learning; characteristics of the organisation; identity; career motivation and work experience. Most of our instruments were adapted from the TALIS 2018 Teacher questionnaire (Organisation for Economic Co-operation and Development, 2018) and a previous national teacher survey (Sági, 2015).

In the qualitative data collection, the first author conducted semi-structured interviews of 40-70 minutes with teachers and principals from two VET schools of this vocational centre in November 2019 (the sampling procedure and the main characteristics of these schools and our interviewees are discussed below under *Sample*). She also collected data through observation (visited the interviewees' classrooms to gain a better understanding of the context and practices of their work and attended one subject department meeting in both schools) and

studied relevant school documents, but these were used only to support our interpretation of the interviews. In addition to the topics studied in the survey, the interviewees were asked about their understanding of teacher continuous professional development (CPD), differences in the work of the three VET teacher profiles, forms and nature of their collaboration with colleagues within and outside the school, and the forms of organisational (and centre level) incentives and support for professional development.

4.1 Instruments

The instruments employed in our study aimed to measure and explore the type of vocational educators' identity, their goals and the competences they perceived as required in their teaching.

4.1.1 Type of Vocational Educator Identity

We first asked survey participants a direct single-choice question whether they considered themselves a teacher or a professional or both.

In the interviews we asked the same question, allowing interviewees to explain and elaborate on their choice.

Next, we aimed to identify their "task perceptions" (Kelchtermans, 1993), how they understood their task and role and thus enact educational goals in teaching (Köpsén, 2014). To do that, we asked what they considered to be their main goals in teaching and which competences were most needed in their teaching work.

4.1.2 Goals in Vocational Teaching

In the survey we adapted a question from Sági (2015), asking respondents to rate the listed goals as to how important they were in their teaching, on a five-point Likert scale.

In the interviews we asked them what they considered to be their main goals in teaching and what success in teaching meant for them.

4.1.3 Teacher Competences in Vocational Teaching

We asked survey participants to rate teacher competence areas as to how much these were needed in their current teaching practice, on a four-point Likert scale. We defined the competence areas by adapting items from Sági (2015) and the TALIS 2018 questionnaire (Organisation for Economic Co-operation and Development, 2018), ensuring that the list would cover all teacher competence areas defined in Hungarian legislation.

In the interviews we asked our interviewees if they saw any difference in the work of general subject teachers, vocational teachers and vocational trainers and what teacher CPD meant for them.

4.2 Methods of Analysis

We analysed our quantitative survey data using the IBM SPSS 28.0 software. We applied descriptive statistics and principal component analysis to examine identity views, one-way analyses of variance (ANOVA) with post-hoc tests and Pearson correlation analysis to identify any association between these views, and chi-square tests, independent t-tests, ANOVAs and the calculation of effect size to quantify the impact of selected factors on these views. Table 1 shows the distribution of our independent variables in our sample.

We analysed our qualitative data using the software atlas.ti. and applying the method of thematic analysis, coding the interview transcripts in a multi-round procedure and using primarily deductive coding (Creswell, 2013). Based on the main themes and sub-themes identified, we searched for similarities and differences between teacher profiles and schools, following the method of constant comparative analysis (Glaser & Strauss, 1967). The reliability of our study (Guba & Lincoln, 1998) is limited by the fact that the coding was done only by the first author. We aimed to increase the transparency and validity of our findings by presenting quotes to support our analysis, while ensuring interviewees' anonymity.

4.3 Sample

38% of vocational educators working in this vocational centre participated in our survey, but the response rate was 49% considering only educators working full time. Most of our respondents worked full time (98%) with a permanent contract (89.1%), most teaching vocations in the light industry (11.6%) and wood industry (10.9%). The average age was 48 years, with 70% aged 40-59 years and 18% aged 60 or older. Table 1 presents data about our survey participants by the independent variables we used in our statistical analyses.

Table 1: Data of Survey Participants by the Independent Variables

		Vocational teacher (N=88)		Vocational trainer (N=50)		Total (N=138)	
		number	%	number	%	number	%
Gender	male	42	47.7	18	36.0	60	43.5
	female	46	52.3	32	64.0	78	56.5
Highest level of qualification	lower than bachelor	1	1.1	8	16.0	9	6.5
	bachelor	32	36.4	31	62.0	63	45.7

	master	55	62.5	11	22.0	66	47.8
First qualification pedagogical		32	36.3	11	22.0	43	31.2
Has a pedagogical qualification		73	83.0	42	84.0	115	83.3
Teaching experience (years)	≤3	14	16.1	7	15.2	21	15.8
(M=14.25, SD=10.18)	4-15	28	32.2	28	60.9	56	42.1
	16-30	36	41.4	11	23.9	47	35.3
	31+	9	10.3	0	0	9	6.8
Work experience in the vocation taught (years)	none	15	18.3	4	8.9	19	15.0
(M=13.87, SD=12.15)	≤3	12	14.6	3	6.7	15	11.8
	4-15	27	32.9	20	44.4	47	37.0
	16-30	21	25.6	10	22.2	31	24.4
	31+	7	8.5	8	17.8	15	11.8
Currently works in the vocation taught		21	25.3	24	53.3	45	35.2

We conducted semi-structured interviews with 12 vocational educators from two VET schools from this vocational centre, selected based on being average and similar to each other in terms of programme types, size and performance. One school (S1) provided VET in multiple vocations from different sectors, the other (S2) in only two related trades. They offered both types of VET programmes in full time as well as in adult education, but the higher level programmes were dominant in S1 and the lower in S2 (see Table 2).

Table 2: Characteristics of the Two VET Schools Participating in the Interview Study

	S1	S2
teachers	75, of which - employed full time: 62 (83%) - vocational educators: 40 (53%)	47, of which - employed full time: 47 (100%) - vocational educators: 26 (55%)
students	703 (226 or 24% in <i>adult education</i> *) - technicum (ISCED 3-4): 530 (102) - vocational school (ISCED 3): 173 (114)	443 (118 or 30%) - technicum (ISCED 3-4): 99 (0) - vocational school (ISCED 3): 344 (188)
vocations	fashion designer, graphic designer, tailor, pedagogical assistant, tourist guide	carpenter, upholsterer

* Numbers in parenthesis refer to those studying in adult education

We selected interviewees with the help of the principal. The sampling procedure followed the principle of maximum variance (Creswell, 2013) so that our interviewees would differ as much as possible in terms of programme type, work function (tasks above teaching) and intensity of professional learning. Main data about the participants is presented in Table 3.

Table 3: Main Data of Interviewees

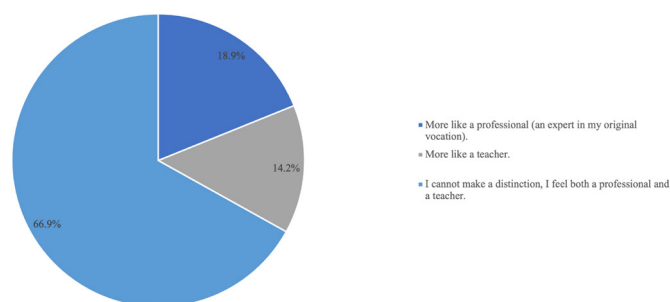
No	school	profile	sector	gender	pedagogical qualification	teaching experience	occupational work experience
T1	S1	vocational teacher			no	4	7 years, now occasional
T2	S1	vocational trainer			yes	30	6 years
T3	S1	vocational teacher	fashion industry	female	yes	19	10 years
T4	S1	vocational teacher			yes	17	14 years
T5	S1	vocational trainer			yes	13	2.5 years
T6	S1	vocational teacher			yes	22	8 (previously occasional)
T7	S2	vocational teacher			in training	6	17 years, now occasional
T8	S2	vocational trainer			yes	14	continuous
T9	S2	vocational teacher	wood industry	male	yes	7	none
T10	S2	vocational trainer			yes	16	continuous
T11	S2	vocational teacher			yes	15	continuous
T12	S2	vocational trainer				8	12 years

5 Results

We present our results structured around our three research questions that refer to vocational educators' type of identity, their goals and competences perceived as required in vocational teaching.

5.1 Type of Identity

Two of three participants in our survey identified themselves as both a teacher and a professional, and slightly more considered themselves a professional than a teacher (see Figure 1). Only gender and the length of work experience showed a significant association with the type of identity.



Note. Question asked: If you currently work (also) as a vocational teacher/trainer, what do you consider yourself to be?

Figure 1: Distribution of Survey Respondents by Type of Identity (N=127)

More female vocational educators felt both a professional and a teacher (75.70%) and fewer as a professional (11.40%) compared to their male colleagues (56.10% and 28.10%, respectively); the Pearson Chi-Square test was significant ($X^2(2)=6.593$, $p=0.037$) with medium effect size (Cramer's $V=0.228$).

The share of those who felt more like a teacher was the highest (35.3%) among those who had worked at most three years in the vocation they were teaching. These educators were also the least likely to consider themselves a professional (8.8%). The latter was most common (33.3%) among those who had worked more than 31 years in their original vocation. Vocational educators with 4-30 years of work experience were most likely to feel both a professional and a teacher (74%) and least like a teacher (5.2%). The maximum likelihood ratio Chi-square test (applied because three cells or 33.3% had expected count less than 5) was significant ($G^2(4)=18.763$, $p<0.001$) with medium effect size (Cramer's $V=0.283$).

In the interview study, of the 12 interviewees one teacher and two trainers who at that time did not work in the vocation they were teaching said that they felt more like a teacher. Still, they stressed that maintaining industry currency was essential for all vocational educators, especially when teaching practical subjects:

Well, [there are] double aims here, aren't there, because I feel like a teacher, but we have to teach a vocation. And even though I feel like a teacher, we have to be very, very much present in the vocation, we have to constantly update our knowledge, because we have to pass that on. (T5)

There was only one vocational teacher who did not consider himself a teacher at all. He continued to practise the vocation he was teaching and currently taught only practical subjects in the school workshop which he saw as "a place where there are colleagues not of the same age as me, but younger colleagues to work with" (T11). He instructed the students not as a teacher but "as a kind of small boss".

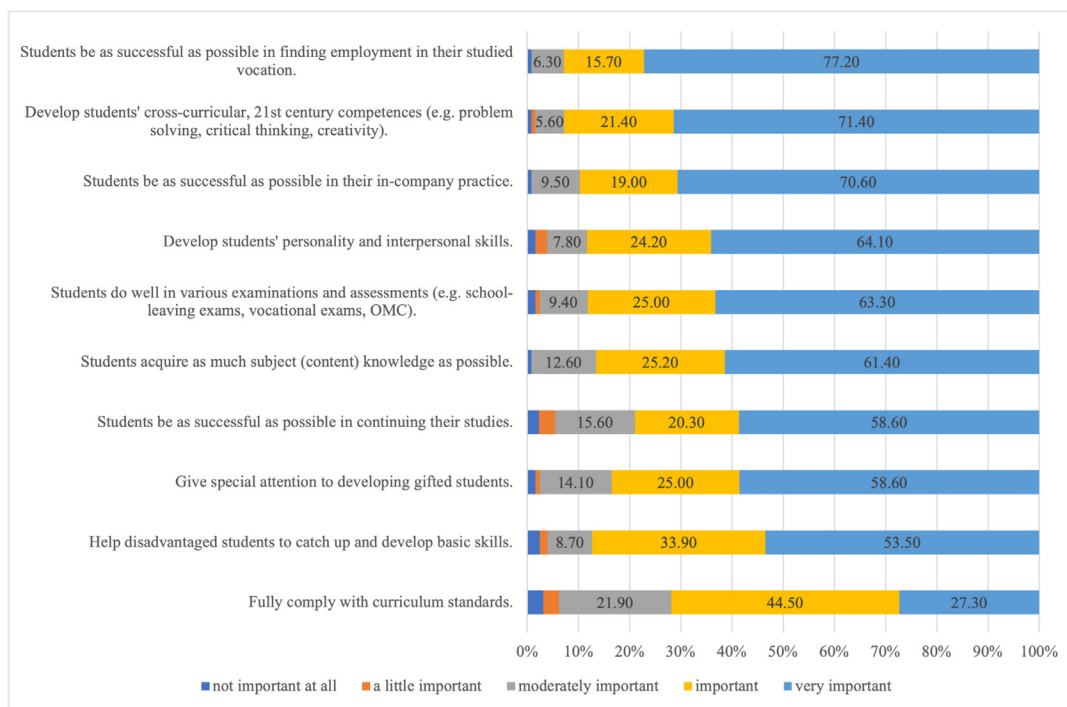
Most of our interviewees, however, said that they could not separate their professional and teacher identities, these got intertwined over time and complementary to each other:

Since I have a background, that is, I am after all a [name of the vocation], I see this as a kind of complement to my identity, this teaching career. So, I cannot separate it, and I don't want to separate it. It complements me. (T4)

Well, I also work, self-employed, in addition [to teaching]. Although because of the school and the adult education and adult training [teaching work], I had to reduce my work to such a level that I now work very minimally, but I think that [name of the vocation] (...) I am proud of the fact that I am a [name of the vocation], I can practise this vocation at a high level, I think, so I have some insights, an affinity to it. But I am also a teacher. So, it's an interesting combination. (T10)

5.2 Goals in Vocational Teaching

The three goals that most survey participants considered as very important in their teaching were helping students to succeed in the labour market, developing their 21st-century competences, and helping them to be successful in their in-company training. Nevertheless, more than half responded that all but one of the listed goals were "very important" for them (see Figure 2 and Table 6).



Note. Question asked was: How important are the following GOALS in your teaching practice? Please mark each row on a scale of 1 to 5 as in the school grading system where 1 means not at all important, and 5 means very important!

Figure 2: Vocational Educators' Perceptions About the Importance of Specific Goals in Teaching (N=126) (%)

Table 6: Means and Standard Deviation of Perceptions About the Importance of Specific Goals in Vocational Teaching

	N	M	SD
Students be as successful as possible in finding employment in their studied vocation.	127	4.69	0.663
Develop students' cross-curricular, 21st century competences (e.g. problem solving, critical thinking, creativity).	126	4.62	0.703
Students be as successful as possible in their in-company practice.	126	4.59	0.730

Students do well in various examinations and assessments (e.g. school-leaving exams, vocational exams, OMC).	128	4.48	0.823
Develop students' personality and interpersonal skills.	128	4.47	0.086
Students acquire as much subject (content) knowledge as possible.	127	4.46	0.775
Give special attention to developing gifted students.	128	4.38	0.871
Help disadvantaged students to catch up and develop basic skills.	127	4.35	0.885
Students be as successful as possible in continuing their studies.	128	4.30	0.999
Fully comply with curriculum standards.	128	3.90	0.946

For the further analysis of perceptions about goals in teaching, we conducted a principal component analysis of our data and identified two components (KMO: 0.887, total variance explained: 63.306%) that we named as *vocation or outcome-focused goal orientation* and *student or education-focused goal orientation* (see Table 7).

Table 7: Principal Component Analysis of Perceptions About the Importance of Specific Goals in Vocational Teaching

	component loading	
	1	2
<i>Component 1: Vocation/outcome-focused goal orientation (Cronbach alpha: 0.741)</i>		
Students be as successful as possible in finding employment in their studied vocation.	0.859	0.169
Students be as successful as possible in their in-company practice.	0.767	0.296
Students be as successful as possible in continuing their studies.	0.724	0.158
Develop students' cross-curricular, 21st century competences (e.g. problem solving, critical thinking, creativity).	0.611	0.476
Students acquire as much subject (content) knowledge as possible.	0.562	0.407
<i>Component 2: Student/education-focused goal orientation (Cronbach alpha: 0.801)</i>		
Develop students' personality and interpersonal skills.	0.275	0.840
Help disadvantaged students to catch up and develop basic skills.	0.295	0.762
Fully comply with curriculum standards.	0.106	0.729
Give special attention to developing gifted students.	0.441	0.662

Note. N = 127. The extraction method was principal component analysis with Varimax with Kaiser Normalization rotation.

There was no statistically significant association between the type of identity and these constructs, but the two goal orientations were more balanced for those with a dual identity (see Table 3).

Table 3: Means and Standard Deviations of Vocational Educators' Goal Orientations by Type of Identity

	Vocation/outcome-focused goals			Student/education-focused goals		
	N	M	SD	N	M	SD
More of a professional (an expert of my original vocation)	20	0.067	0.992	20	-0.300	1.156
More of a teacher	18	0.011	0.700	18	0.218	0.770
I can't tell the difference; I feel both a professional and a teacher.	81	-0.023	1.053	81	0.016	1.003

Differences in the attribution of importance to vocation/outcome-focused and education/student-focused goals in teaching were related to gender, holding a pedagogical qualification and occupational work experience.

Female vocational educators embraced more student/education-focused goals in their teaching practice (N=70, M=0.231, SD=0.850) than their male colleagues (N=53, M=-0.305, SD=1.104); the independent samples t-test was significant ($t(121)=-3.043$, $p=0.003$) with a large effect size (Cohen's $d=0.968$).

Those who had a pedagogical qualification also embraced student/education-focused goals to a larger extent (N=105, M=-0.095, SD=0.890) than those without such a qualification (N=18, M=-0.560, SD=1.391); the independent samples t-test was significant ($t(121)=-2.616$, $p=0.01$) with a large effect size (Cohen's $d=0.977$).

On the other hand, those who had worked in the vocation they were teaching attributed more importance to vocation/outcome-focused goals (N=101, M=-0.090, SD=0.963) than their colleagues without such work experience (N=18, M=-0.444, SD=1.051); the independent samples t-test was significant ($t(117)=-2.137$, $p=0.035$) with a large effect size (Cohen's $d=0.977$).

In the interviews, we asked vocational educators to express freely what they considered to be their main goals in teaching and define what "success in teaching" meant for them. Both vocational teachers and trainers most often mentioned goals that we categorised under the two themes of *training good professionals* and *motivating students and getting them to love the vocation they are training for*. In school 1, four of the six vocational educators we interviewed mentioned the latter, but only one did so in the other school. These educators also interpreted success in teaching in terms of motivating students:

And success for me is when I have students who love this vocation or develop over the years to love it, enjoy doing it, I see them becoming more and more skilful, but mostly that I see them enjoying doing it. They like to be here in my classes, it's a great experience of success that they like coming here and that they are happy, so to speak, in this class. (T5)

In school 2, five of the six vocational educators defined *preparing students for successful exams* and *training good professionals* as their main goals in teaching:

The main goal is (...) to train skilled workers who are worthy to be called [name of the vocation] and who can succeed in today's world. (T10)

Two of them interpreted success in the long term, in terms of positive feedback from and the professional success of former students:

Well [success is], for example, when they pass their exams, their vocational exam. Or when I received a message from one of my students. A former student of ours, who is now working in Germany, sent me the technical drawings he was working from and said that he owes it to me that he can understand them at all. (T7)

Another, more direct measure of success for some was their *students' performance at student competitions*. The most prestigious competitions in VET are EuroSkills and WorldSkills and the related national competitions where students from this school perform very well. These competitions were seen also as important means of boosting student motivation.

The vocational educators in none of the schools referred to lowering expectations due to the students' low prior achievement and motivation, which several general subject teachers in S2 mentioned in our interview study. Rather, one vocational trainer in S2 claimed *maintaining the quality* (of VET) was the mission of their school, or at least of the vocational educators in the school. Working as chair of vocational examination boards, he was also trying to promote this mission in other VET schools in the countryside he was visiting:

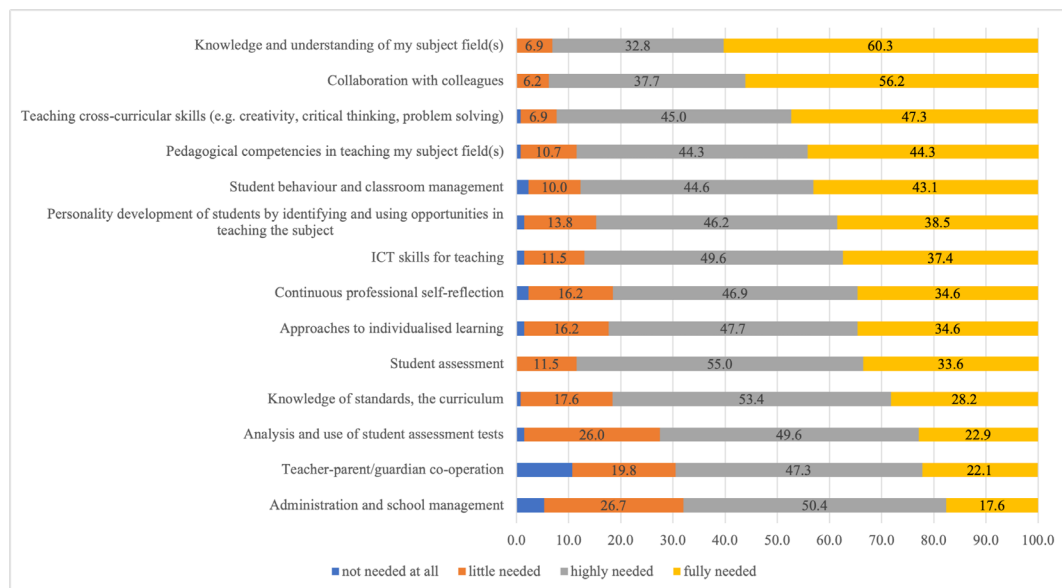
The "children material" is what it is. You know what the students are like, not just here but in the countryside, everywhere. We are trying, we are trying to maintain the quality, to restore the prestige of the vocation, the prestige of skilled workers' training. But to do that, we should not lower the standard, but try to get the children to rise to the standard. We have a lot of school failures because of that, so we don't give in, we have expectations (...). In the countryside, it's not like that. (T10)

Furthermore, all but one (an art) teacher noted the difference in their goals when teaching young students in full-time education and teaching adults. While the motivation of students who enter IVET at the age of 14 is often very low (which may partly result from a wrong career choice due to young age and/or parental/teacher pressure), those who start learning a vocation as an adult – whose number has increased significantly since the introduction of the opportunity to obtain two vocational qualifications free of charge in 2015 – are typically fully motivated to learn. Motivation and discipline are rarely issues when teaching adults, educators can thus focus much more on vocational training, which significantly increases their chances to experience success in teaching. They therefore enjoy working in adult education, even though its schedule (afternoons and weekends) makes it quite demanding for them:

It's nice to work with them, it's a very positive experience because the adults are always more enthusiastic. They don't need to be pushed, because they want to do it (...). Well, in adult education, perhaps you give more. Precisely because there is more capacity to receive. In full-time education, it's the transfer to students, of the love of the vocation, the motivation. Because I think that nowadays teenagers are not motivated, so you have to give them something that makes them feel that they are successful. (T2)

5.3 Teacher Competences in Vocational Teaching

Respondents in our survey indicated subject matter knowledge and collaboration skills as the two most important competence areas, more than half thought these were fully needed in their current teaching practice (see Figure 3 and Table 8). Teaching cross-curricular skills, pedagogical content knowledge, and student behaviour and classroom management followed closely. The analysis and use of student assessment, teacher-parent cooperation, and administration and school management were seen as the least important competence areas, though still rated as highly or fully necessary by the majority.



Note. Question asked was: To what extent do you consider the following pedagogical competences necessary in your current pedagogical practice?

Figure 3: Perceptions About the Importance of Teacher Competence Areas in Vocational Teaching (N=126) (%)

Table 8: Means and Standard Deviation of Perceptions About the Importance of Teacher Competence Areas in Vocational Teaching

	N	M	SD
Knowledge and understanding of my subject field(s)	131	3.53	0.624
Collaboration with colleagues	130	3.50	0.613
Teaching cross-curricular skills (e.g. creativity, critical thinking, problem solving)	131	3.39	0.651
Pedagogical competencies in teaching my subject field(s)	131	3.32	0.694
Student behaviour and classroom management	130	3.28	0.739
ICT skills for teaching	131	3.23	0.708
Student assessment	131	3.22	0.636
Personality development of students by identifying and using opportunities in teaching the subject	130	3.22	0.736
Approaches to individualised learning	130	3.15	0.741
Continuous professional self-reflection	130	3.14	0.765
Knowledge of standards, the curriculum	131	3.09	0.696
Analysis and use of student assessment tests	131	2.94	0.742
Teacher-parent/guardian co-operation	131	2.81	0.904
Administration and school management	131	2.80	0.789

One-way analyses of variance (ANOVA) showed significant differences with medium effect size in vocational educators' perceptions about the importance of two competence areas according to the type of identity. Those who thought of themselves more as a teacher attributed more importance to pedagogical content knowledge ($N=18$, $M=3.68$, $SD=0.48$, $F(2,126)=3.907$, $p=0.023$, $\eta^2=0.059$) and student behaviour and classroom management ($N=18$, $M=3.72$, $SD=0.461$, $F(2,126)=6.765$, $p=0.002$, $\eta^2=0.099$) than those who considered themselves a professional ($N=24$, $M=3.08$, $SD=0.776$ and $N=24$, $M=2.92$, $SD=0.830$, respectively; Scheffe post-hoc tests were not significant comparing those with a dual identity to either of these groups).

There were correlations of medium strength between goal orientations and perceptions about the importance of specific competence areas (see Table 9). Vocation/outcome-focused goals correlated most with content knowledge, teaching cross-curricular skills and collaboration with colleagues, whereas student/education-focused goals with pedagogical content knowledge, the more general pedagogical competences and cooperation with parents. Development of students' personality correlated significantly with both, but more strongly with student/education-focused goals.

Table 9: Results of Pearson Correlation Analysis Between Goal Orientation and Perceptions About the Importance of Teacher Competence in Vocational Teaching

	vocation/outcome-focused goal orientation				student/education-focused goal orientation			
	Correlation	N	Lower C.I.	Upper C.I.	Correlation	N	Lower C.I.	Upper C.I.
Knowledge and understanding of my subject field(s)	0.431**	123	0.275	0.565	0.191*	123	0.014	0.356
Pedagogical competencies in teaching my subject field(s)	0.298**	123	0.128	0.451	0.499**	123	0.354	0.621
Knowledge of standards, the curriculum	0.294**	123	0.123	0.447	0.329**	123	0.162	0.479
Student assessment	0.403**	123	0.243	0.541	0.387**	123	0.226	0.528
ICT skills for teaching	0.223*	123	0.048	0.385	0.095	123	-0.084	0.267
Student behaviour and classroom management	0.225*	122	0.049	0.387	0.506**	122	0.361	0.628
Administration and school management	0.09	123	-0.088	0.263	0.273**	123	0.101	0.43
Approaches to individualised learning	0.273**	122	0.1	0.43	0.437**	122	0.281	0.571
Personality development of students by identifying and using opportunities in teaching the subject	0.322**	123	0.154	0.472	0.456**	123	0.304	0.586
Teaching cross-curricular skills (e.g. creativity, critical thinking, problem solving)	0.449**	123	0.296	0.58	0.225*	123	0.05	0.387
Analysis and use of student assessment tests	0.324**	123	0.156	0.474	0.305**	123	0.135	0.457
Teacher-parent/guardian co-operation	0.029	123	-0.149	0.205	0.364**	123	0.199	0.508
Continuous professional self-reflection	0.286**	123	0.115	0.441	0.273**	123	0.1	0.429
Collaboration with colleagues	0.477**	123	0.327	0.603	0.224*	123	0.049	0.386

* $p < .05$. ** $p < .01$.

Independent samples t-tests and ANOVAs showed statistically significant differences in perceptions about the significance of several competence areas according to most of our independent variables except for current work in the vocation and the length of work and teaching experience.

Regarding teacher profile, two competence areas showed significant differences ($t(129)=2.516$, $p=0.013$ and $t(128)=-2.032$, $p=0.044$) with small effect size (Cohen's $d=0.46$ and -0.375): Vocational trainers saw less need for IT skills but more for approaches to individualised learning ($N=46$, $M=3.02$, $SD=0.715$ and $N=45$, $M=3.33$, $SD=0.707$) than vocational teachers ($N=85$, $M=3.34$, $SD=0.682$ and $N=85$, $M=3.06$, $SD=0.746$, respectively).

Most significant differences with medium effect size were found between the perceptions of male and female vocational educators (see Table 10). Female respondents considered content knowledge, pedagogical content knowledge and general pedagogical competences more important in their teaching work than their male colleagues.

Table 10: Results of Independent Samples T-tests of Differences in Perceptions about the Importance of Teacher Competence Areas in Vocational Teaching by Gender

	male			female			<i>t</i>	p	Cohen's <i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>			
Knowledge and understanding of my subject field(s)	59	3.31	0.676	72	3.72	0.510	-3.915	<.001	0.590
Pedagogical competencies in teaching my subject field(s)	59	3.07	0.691	72	3.53	0.627	-3.987	0.012	0.657
Student assessment	59	3.07	0.640	72	3.35	0.609	-2.555	0.005	0.623
Student behaviour and classroom management	59	3.08	0.749	71	3.45	0.693	-2.890	0.008	0.719
Approaches to individualised learning	58	2.97	0.700	72	3.31	0.744	-2.660	0.013	0.725

Qualifications also showed a significant association of medium effect size with these perceptions. Educators whose first qualification was not pedagogical considered collaboration with colleagues a more important competence ($N=91$, $M=3.59$, $SD=0.557$) than those who first obtained a pedagogical degree ($N=39$, $M=3.28$, $SD=0.686$; $t(128)=2.718$, $p=0.007$, Cohen's $d=0.599$). Holding a pedagogical qualification appeared to make the most difference: Those who had it thought that pedagogical content knowledge, general pedagogical competences and teacher-parent collaboration skills were more important than those who had no such qualification (see Table 11).

Table 11: Results of One-Way Analyses of Variance (ANOVA) in Perceptions About the Necessity of Teacher Competence Areas in Vocational Teaching of Vocational Educators With and Without a Pedagogical Qualification

	<i>has a pedagogical qualification</i>			<i>has no pedagogical qualification</i>			<i>t</i>	p	Cohen's <i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>			
Pedagogical competencies in teaching my subject field(s)	109	3.42	0.628	22	2.82	0.795	-3.926	<.001	0.658
Knowledge of standards, the curriculum	109	3.15	0.692	33	2.82	0.664	-2.046	0.043	0.687
Student assessment	109	3.28	0.625	22	2.91	0.610	-2.579	0.011	0.623
Student behaviour and classroom management	108	3.38	0.680	22	2.82	0.853	-3.376	<.001	0.711

Approaches to individualised learning	108	3.27	0.678	22	2.59	0.796	-4.145	<.001	0.699
Personality development of students by identifying and using opportunities in teaching the subject	108	3.28	0.721	22	2.91	0.750	-2.171	0.032	0.726
Teaching cross-curricular skills (e.g. creativity, critical thinking, problem solving)	109	3.44	0.63	22	3.14	0.710	-2.021	0.045	0.644
Teacher-parent/guardian co-operation	109	2.92	0.851	22	2.27	0.985	-3.155	0.002	0.874

Finally, vocational educators who had worked in the vocation they were teaching considered the knowledge of qualification standards more important ($N=108$, $M=3.17$, $SD=0.690$) than those who had not ($N=19$, $M=2.74$, $SD=0.562$; $t(125)=-2.566$, $p=0.011$, Cohen's $d=0.673$).

According to most of our interviewees, the same competences are needed for teaching general subjects, vocational theory and practice, only the focus might be different. They saw the main difference in the work of the three VET teacher profiles in terms of student motivation (see Figure 4): VET students, especially in the lower level skilled workers' training are often little motivated to study general subjects and struggle with learning theory. Practical knowledge and work experience in the field were emphasised as highly important in vocational teaching, even by those currently not working in the vocation they were teaching and therefore tried to maintain their industry currency through other means (their professional learning activities are discussed in detail in Bükki, 2022). They believed that this is what ensures the "credibility" of the vocational educator, which is required even if students are to be taught only the "basics". Credibility was seen as a prerequisite for "good VET", which gives the teacher confidence and makes their teaching more enjoyable and attractive to the students:

I don't think someone is a teacher who is not good at practising their vocation, or someone is a good teacher who is not present in their vocation. I mean, we are talking about vocational teachers. A Hungarian teacher or a maths teacher are completely different. But I think that the only way to improve professionally is to practice the vocation you are teaching. (T7)

To be a good vocational teacher, you have to keep up with the technological and technical innovations, so you have to go to different exhibitions and events and absorb the knowledge there. If you don't do that, you will fall behind. If you take the new textbooks and bring them to class, and if you bring in the brochures as well and constantly browse the Internet, this provides the basis for being able to hold good lessons and for the good quality of teaching. (...) So when you are in the business and really do it, you need to be innovative, to know and use what's new, because the clientele that you're working with expect you to be up to date with the latest trends. I think a practitioner can deliver the material much better. He can stand in front of the child and teach in a much more authentic way. (...) A vocational trainer is the same as a vocational teacher. (T10)

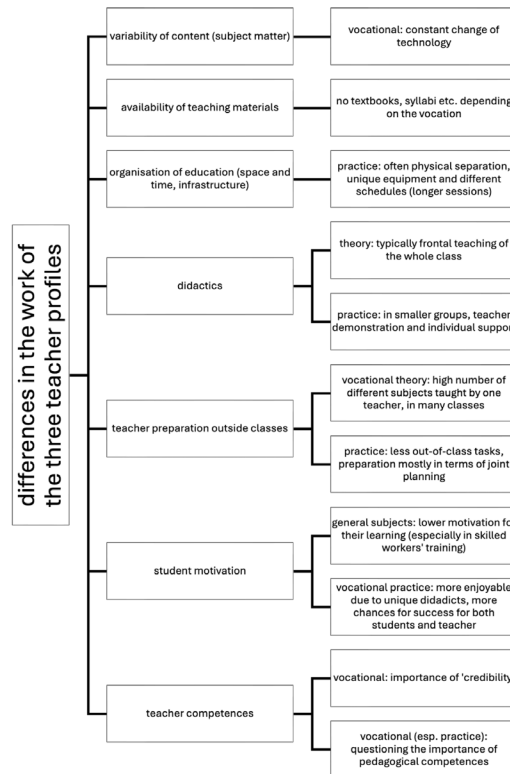


Figure 4: Vocational Educators' Perceptions About the Differences in the Work of the Three VET Teacher Profiles

The idea of dual professionalism, that is, considering pedagogical/methodological competences and content (occupational) knowledge equally important, appeared in our interviews also when vocational educators defined what the concept of "teacher continuous professional development" meant to them. However, only one vocational teacher and two vocational trainers explained this concept immediately as such. Vocational teachers typically interpreted teacher CPD first or exclusively in terms of keeping pace with the changes in the vocation and technology, and, especially in school 2, some even argued that the only authentic form of this was practising the vocation.

6 Discussion

Our mixed method study aimed to explore the professional identity of vocational educators in Hungary. The majority of vocational teachers and trainers participating in our survey and interviews started teaching as a second career, slightly more among the trainers, though

nearly all have later obtained a pedagogical qualification. Most identified as both a teacher and a professional (an expert of their prior occupation), they felt that these two could not be separated but complemented each other. Educators with a dual identity showed a balanced goal orientation, attributing about the same importance to vocation/outcome-oriented and student/education-oriented goals in their teaching. However, as regards their perceptions about the importance of specific competence areas required for vocational teaching, there appeared to be a dominance of vocational expertise within this dual identity. Nearly all our survey participants considered subject matter knowledge fully needed in their teaching work, and all our interviewees thought work experience and keeping pace with the changes in the vocation they were teaching were essential for good quality VET. They claimed that it gave them credibility, which was important to feel confident and to increase students' motivation. These results largely validate the findings of previous research (Antera, 2022; Broad, 2015, 2016, 2019; Fejes & Köpsén, 2014; Robson, 1998) in a new VET context and based on both quantitative and qualitative data, which provides the main novelty and importance of our study. Our findings furthermore point to some specific aspects of vocational educators' identity and factors influencing its formation that might be relevant in other VET systems as well.

The analysis of our quantitative data showed that the type of identity and task perceptions measured in terms of goal orientations and perceptions about the importance of competence areas were influenced by gender, qualifications and work experience.

Female vocational educators were more likely to identify as both a teacher and a professional, they embraced more student/education-focused goals, and considered content knowledge, pedagogical content knowledge and general pedagogical competences more important in their teaching work than their male colleagues. However, this relation might (also) be due to some other factors, such as the attractiveness and labour market position of the vocation taught, which might influence student motivations. We saw this in our interview study in school 1 where vocational educators teaching a vocation with low salary prospects defined increasing student motivation as their main goal and criterion of success in teaching.

Holding a teacher qualification did not have a statistically significant effect on the type of identity. Our non-significant data showed no difference for dual identity, but a higher share of teacher identity. This result is similar to Gustafson's (2016) where vocational educators who had participated in teacher training *before* entering the teacher career were more likely to see themselves as teachers. Participating in formal teacher education appears, however, to have a profound influence on vocational educators' task perceptions. Holding a pedagogical qualification was related to higher student/education-focused goal orientation and attribution of greater importance to pedagogical content knowledge (CPK), general pedagogical competences and parent-teacher cooperation skills. Vocational educators whose highest level of qualification was a master's degree saw more need for ICT skills; and those whose first qualification was not pedagogical considered collaboration skills more important in their

teaching. These results confirm previous research that found obtaining a teacher qualification and a higher level degree had a positive impact on teachers' pedagogical competences and confidence (self-efficacy) as well as their professional learning both in subject area and pedagogy (Andersen et al., 2016; Smith, 2019).

Our quantitative data showed also that work experience was related to the type of identity – vocational educators who had not worked at all or worked at most 3 years in the vocation they were teaching were more likely to consider themselves teachers –, and those who had work in the vocation attributed more importance to vocation/outcome-focused goals and the knowledge of qualification standards.

There was, however, hardly any difference in the type of identity between educators with more or less teaching experience, except for the 31+ years group where dual identity was less and teacher identity more common. These results were not significant, but still seem to be somewhat in contrast with previous research. Gustafson's (2016) results (also non-significant) suggested that identity becomes more integrated with more teaching experience. Andersson and Köpsén (2018), who studied Swedish vocational teachers' participation in professional learning activities in a large-scale national survey (N=886), interpreted more boundary crossing activities among those with longer work and shorter teaching experience as the result of being less "distant" from the practice of initial occupation and having a stronger professional identity. On the other hand, our survey data suggests that student/education-focused goal orientation and the attribution of importance to CPK and general pedagogical competences did increase with teaching experience, though these results were not statistically significant either.

As regards differences by teacher profile, more vocational trainers identified as professionals (26.7%) and fewer had a dual identity (62.25%) than vocational teachers in our survey (the respective figures for the latter were 14.6% and 69.5%). They also had higher scores on both types of goal orientation but even higher on student/education-focused goals. However, none of these results were statistically significant. The only significant difference by teacher profile was that vocational trainers considered ICT skills less, and approaches to individualised learning more important in their teaching work. This might be explained by their different work contexts, that is, traditional classroom versus workshop setting, which imply different forms of organising education in terms of space and time. In the interviews, vocational educators highlighted the unique learning environment of workshop training with smaller student groups and a closer student-teacher relationship, which may enhance immediate student feedback and continuous teacher reflection. Our survey data about vocational educators' educational and work background (see also Table 1) nevertheless suggest different career paths and thus possibly different identity formation routes for vocational teachers and vocational trainers in Hungary (Bülkki, 2022).

Our qualitative data showed no differences between vocational teachers and vocational trainers in how they defined their goals and success in teaching, but there was some characteristic difference depending on which school they worked in, which points to the importance of work context. Training good professionals was a common theme in both schools, but in S1 most vocational educators referred to *motivating students and getting them to love the vocation they are training for* as their main goal and criterium of success in teaching, whereas the main theme in S2 was *preparing students to be successful at the exam*. One vocational trainer here also referred to maintaining the quality as the mission of their school (at least as far as vocational educators were concerned). He meant the quality of VET, despite students' generally low basic competences, which resembles the narrative *protecting standards* (of the vocation) in the study of Robson et al. (2004). The vocational educators in this school also generally understood teacher professional development in terms of maintaining industry currency and many of them continued to work part time in the vocation they were teaching. In S1, on the other hand, vocational educators also emphasised the importance of pedagogical/didactical competences and their goal of motivating students and sharing the love of the vocation recalls the narrative of *fostering activities* in Köpsén (2014). Educators in this school also noted the significant difference in teaching young students and adults due to their different motivations and attitudes to learning.

These differences suggest that vocational educators' task perceptions might be significantly influenced by the school and the wider context, a finding that echoes the idea of identity formation through social engagement and participation in a community of practice in the socio-cultural theory of learning (Lave & Wenger, 1991; Wenger, 1998):

- the school culture, including a shared mission and a sense of collective self-efficacy, as we saw in S2;
- the level and type of VET training programme, with different student populations in terms of motivation and general competence level; and
- the attractiveness of the vocation itself, related to prospective payments and ease of finding employment, which seemed to negatively influence students' motivation in S1.

The concept of dual identity is closely related to the concept of dual professionalism, and we also examined vocational educators' understanding of teacher professional development to see what that implied about their vocational identity. While several noted the equal importance of maintaining industry currency and developing pedagogical-didactical competences, most of our interviewees, especially in school 2, seemed to prioritise the former. Our ana-

lysis of the different forms and content focus of vocational educators' professional learning activities (see in more detail in Bülkki, 2022) did not show any statistically significant differences by the type of identity. However, vocational educators participated in fewer teacher training courses and conferences/workshops than their colleagues teaching general subjects, and those who continued to work part-time in the vocation they were teaching also focused more on developing their occupation expertise than on pedagogical/didactical learning. This suggests that while continuing work in the prior vocation is indeed an important form of vocational educators' professional development and helps maintain their original occupational identity, it may also be a barrier to developing the teacher identity.

7 Conclusion

Our mixed method study of the professional identity views of vocational educators in Hungary showed that most vocational teachers and trainers in our samples identified as both a teacher and a professional (an expert of their prior occupation). However, such a direct question about the type of identity may conceal important aspects of this identity and factors that influence its formation. In our quantitative analysis, the type of identity was associated only with gender and the length of occupational work experience. Perceptions about the main goals in teaching revealed different vocation/outcome-focused and student/education-focused goal orientations influenced by gender, qualifications and work experience, while our qualitative data showed the potential significant effect of school culture and the wider socio-economic context (characteristics of the vocation taught). The goal orientations identified in our survey were more balanced for those with a dual identity, and they correlated with perceptions about the importance of different teacher competence areas, which were most influenced by whether the educator held a pedagogical qualification or not. The interviews and the analysis of professional learning activities (Bülkki, 2022) showed that vocational educators in our study often prioritised the development of occupational expertise as they believed it was what gave them credibility that was seen as essential to "good VET".

Our findings are consistent with the concept of "identity learning" (Beijaard, 2019) that conceptualises continuous professional development throughout the teacher career as an identity-making process where teachers' professional identity is both a condition and outcome of participating in a myriad of formal, non-formal and informal learning experiences. But exactly because of this and considering the significant impact of formal teacher education and continued work in the prior occupation that we found in this study, it is of utmost importance that policy and schools provide and support learning opportunities for vocational educators to develop both their occupational and teaching expertise to ensure a balanced dual identity that seems best suited for vocational teaching.

Our study has several limitations. The generalisability of our results is limited by the lack of representativity in the quantitative data, and the reliability of our qualitative analysis is limited by the fact that the coding was done only by the first author. Although our interview study found some evidence that the school context and the vocation are important contextual factors, the small group sizes did not allow such analyses of the survey data. Nevertheless, we believe our exploratory study can be of international relevance validating previous research findings in a new VET context and employing a mixed method design which is rather rare in the literature.

Finally, as regards the practical implications, if teacher continuous professional development is understood as identity learning in its ultimate sense, both formal teacher (trainer) education and in-service VET teacher training should pay adequate attention to encouraging vocational educators to reflect upon their own identity. This should include considering how they define their tasks and what competences they see as essential for good vocational teaching. Such programmes should provide ample opportunities for the development of both occupational and pedagogical expertise, including the development of pedagogical content knowledge that links these two.

As regards future research, we recommend the further exploration of the identity views of vocational educators using a mixed method design similar to that of our pilot study but further developing the survey instruments. For example, the scale measuring the goals in teaching could incorporate the main themes we identified in our interview study. It would be also important to collect data in a larger representative survey that allows analysis by all relevant individual and organisational factors, including vocation and school culture.

Ethics Statement

The research study reported in this paper was conducted following the ethical principles of the Faculty of Education and Psychology (PPK) of ELTE Eötvös Loránd University, Budapest, and has been approved by the ELTE PPK Research Ethics Committee permit No 2019/101. Informed consent was obtained from all survey and interview participants and all other ethical principles prescribed by the IJRNET Review Board were adhered to.

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