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**Under a double burden - analysing the professional and pedagogical identity of vocational teachers in an international context**

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**Abstract:** *The aim of this study is to explore the dual professional and pedagogical identities of vocational teachers and to illustrate the challenges and implications of the co-existence of these two identities. The research has revealed that the continuous development of both professional and pedagogical competences is essential for vocational teachers, as both are crucial for a successful teaching career. The analysis compared examples from the international literature with the Hungarian situation and sought to identify how the development of the dual identity of subject teachers could be better supported in training programmes and in workplace practice. The research finds that maintaining dual identity is particularly important for VET teachers, who are often caught between their professional roles and their pedagogical expectations. Consciously developing a dual identity can help reduce the risk of career drop-out and increase teacher effectiveness. Based on a comparison of international examples and the Hungarian VET system, we make recommendations to support continuous professional development (CPD) for teachers, integrate practical training elements and help maintain a balance between professional and pedagogical roles.*

**Keywords:** *professional identity; teacher identity; vocational teachers;*

## 1. Introduction

VET has preserved the duality of the requirements of "professionalism" and "teacherhood", and the expectation of professional knowledge as a prerequisite for obtaining a teacher qualification and practising as a teacher (Benedek & Molnár, 2015). This is present at all levels of VET teacher education, as the whole training is aligned to the professional structure and follows the vocational education (Rádli, 2011). VET teachers have a professional qualification that can be used independently, and students acquire their teacher qualification in parallel or afterwards (Bacsa-Bán, 2021).

The aim of this paper is to review the international literature to demonstrate the presence of this dual identity and to explore how vocational teacher educators can support the development of

students' teacher identity in a way that maintains the link with the professional fields, i.e. supports their professional identity.

## 2. VET trainers

In European vocational education and training systems, trainers are not necessarily teachers, i.e. not all of them have a teacher training diploma or a teacher training qualification. Trainers are usually professionals who share their experience and knowledge in their own field with VET and/or adult learners. European vocational education and training systems tend to be more flexible in their approach to teacher qualifications. This is because professionals in industry and the professions often have practical knowledge and experience that is essential for teaching and learning a particular profession. For this reason, in many European countries, teaching posts in vocational education and training require primarily professional qualifications and experience and not necessarily a teaching qualification. Of course, there are countries and institutions where vocational trainers must have a pedagogical qualification. These institutions often emphasise the importance of pedagogical skills for trainers and ensure that trainers receive appropriate methodological training to teach and support learning (OECD, 2022).

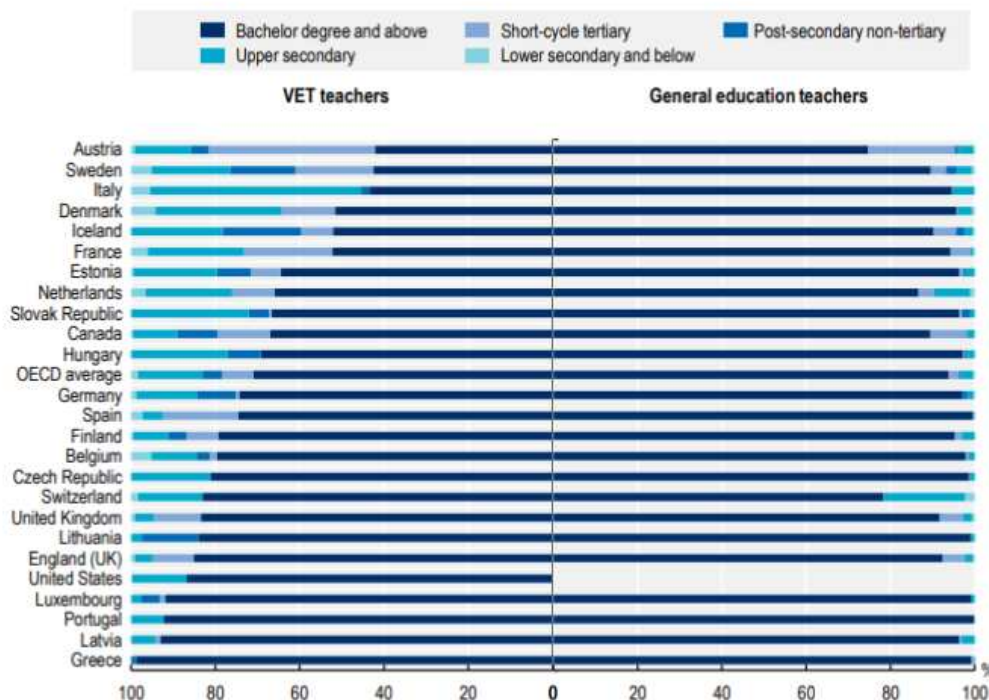


Figure 1. Distribution of vocational and general education teachers by highest level of education Source: OECD, 2022

As Figure 1 shows, there is a wide variation in the requirements for the qualifications of vocational teachers across countries, while for general education teachers there is not such a wide variation. However, in addition to qualifications, there are also differences in the competences expected (Table 1). These expectations may differ depending on the type of subject taught (vocational theory, practical or general education general knowledge teachers) and may also depend on the level of education (e.g. lower and higher vocational education), as shown in the figure below (Figure 2) (Cedefop, 2022).

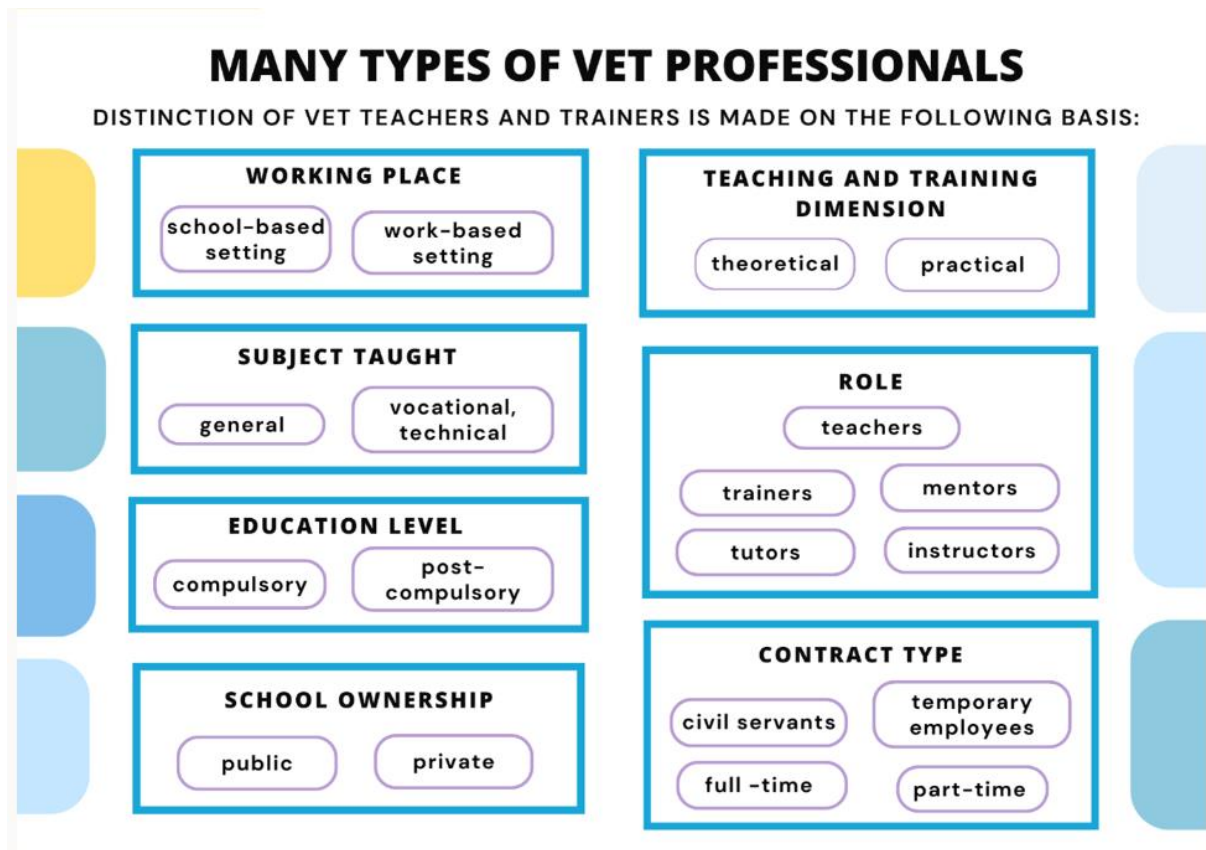


Figure 2. Types of professionals working in VET Source: Cedefop, 2022

Overall, then, European VET systems show diversity in terms of teacher qualifications, but there is a general tendency for a significant proportion of teachers to be primarily professionals, transferring their practical knowledge and experience to students.

### 3. The concept and role of dual identity

The issue of teacher identity is receiving increasing attention in the field of education, whether it is teacher education or teacher training (Korthagen et al., 2001; Sachs, 2005; Freese, 2006; Beauchamp & Thomas, 2009). The identity of teacher candidates is formed through their progression in their studies (Beauchamp & Thomas, 2009). It is important to note that teacher

identity is closely intertwined with teacher education. Whether they are early career or experienced teachers, identity is what defines and guides professional activity as a "resource that people use to explain, justify, and interpret themselves in relation to others and in relation to the world in general" (MacLure, 1993: 311). It follows that a deeper understanding of teacher identity can also contribute to the development of teacher education programmes (Beauchamp & Thomas, 2009). The literature on identity emphasises that identity is dynamic and changes over time, in which individual factors such as emotions (Rodgers & Scott, 2008) and external factors such as work and life experience play a role (Sachs, 2005; Rodgers & Scott, 2008).

Identity is thus a constantly evolving, dynamic phenomenon (Beauchamp & Thomas, 2009). Although the constructs of self, self-concept, self-esteem, self-confidence and identity are often used in educational research, little empirical research has addressed these concepts due to the difficulties of measuring the self (Burke & Tully, 1977).

The literature on dual identity shows that most teacher candidates enter teacher education having been a recognised professional in their previous career, and many maintain this throughout their training, even making it a priority. As vocational teacher educators, we see this statement borne out by our own training over the past decades. The reason for this, as Robson et al (2004) argue, is that their previous (professional) experience gives them the credibility they need for their new role as educators. However, this continued identity with their previous profession may prevent them from later considering themselves as 'real' teachers. It is this distance from the career that training should primarily change, and the success of the whole career socialisation process can be seen in this. This is even more necessary as other studies (Orr & Simmons, 2010) have shown that some vocational teachers enter the teaching profession almost by accident. Others choose the field as a way out of their current employment, i.e. because of a disincentive, and overall, it is not the attractiveness of the career that prevails, but rather its potential as a second career that is the attractive aspect.

Thus, vocational teacher identity can be seen as a blend of professional identity and teacher identity (Robson et al., 2004; Fejes & Köpsen 2014). Therefore, professional educators need to be competent in both teacher identity and professional identity. Vocational teachers need to have a professional identity to be competent in terms of their professional knowledge and skills, but they also need to be familiar with prevailing norms, traditions, ways of relating, i.e. they need to have sociocultural knowledge about the practice of the profession. According to Berner (2010), vocational educators perform so-called boundary work (see earlier Robson et al., 2004: 'gatekeepers') as they figuratively bring the practice of work into the practice of education.

Vocational trainers tell stories and give examples to students of how to communicate and what to do in their practices and work. It is therefore necessary for vocational educators to have an up-to-date and modern professional identity that meets the professional knowledge and skills needs of the present, as well as the values and attitudes of the future.

In Hungary, there is little research on this topic (Füzy, 2012), and hardly any analysis of teachers working in VET (Bükki & Fehérvári, 2021). The attachment of VET teachers in Hungary is questionable, whether they tend to lean towards subject or pedagogical fields. Vocational teacher education tries to resolve this dilemma by emphasizing the preservation of students' identity and strengthening the connection with everyday life not only through theoretical knowledge but also through corporate practices (Bacsa-Bán, 2021). Smith and Yasukawa (2017) recognize the importance of a "good vocational teacher" being proficient in both teaching skills and professional and industrial experience.

The formation of professional identity is a dynamic process in which students are active participants rather than passive bystanders (Beijaard et al., 2004; Schepens et al., 2009). As part of this process, they need to answer the question "Who am I?" while also answering "What kind of teacher do I want to become?". This suggests that an important part of teacher identity development is proper self-reflection.

This issue is particularly relevant in the field of teacher education, where the dual identity of students, i.e. the combination of their existing professional identity and the teacher identity they will develop during their training, is of particular importance. In doing so, it is important that professional belonging is maintained, and that the identity of the teacher educator is developed together during the training (Bacsa-Bán, 2021). On the other hand, the development of the professional identity of prospective teacher educators can be effective in terms of their commitment to and motivation for the career. In other words, the aim of teacher education programmes is not only to impart the necessary pedagogical knowledge and to develop and shape competences, but it is the joint (formation) and development of a differentiated professional and pedagogical identity that is essential during the training period. In this context, the above-mentioned research on professional identity research also argues that in the future, the professional and pedagogical identity formation and shaping of teacher education/teacher training will require greater awareness on the part of teacher trainers, with the aim that training itself will contribute to reducing the drop-out rate of teachers entering the profession, as well as to the effectiveness of teacher training.

#### 4. The potential of dual identity, following international examples

It can be concluded that the work of VET teachers, VET educators and VET teachers is based on dual professionalism, and that they are expected to maintain this dual identity, i.e. they are expected to keep both their pedagogical and professional competences up to date (Andersson & Köpsén, 2015; Fejes & Köpsén, 2014; Köpsén & Andersson, 2017; Virkkula & Nissila, 2014). As Lloyd and Payne (2012:2) put it in their research: 'VET teachers are faced with a "dual" competence requirement, which requires them to be up to date in the craft they teach, while also continuously developing the pedagogical skills needed to transfer knowledge'. In most countries, this dual focus is already a general guideline for entry into teacher education or in-service teacher training.

The duality in the professionalism of VET teachers varies across countries in their descriptions of VET and VET teacher education (Cedefop, 2009; Parsons et al., 2009). The aims of VET, the expectations of VET teachers and the forms of teacher employment vary, and there is no uniform way of organising VET (Billett, 2011). At international level, 'vocational teacher' is not a clearly defined profession (see Figure 2 and for more details Cedefop, 2022; Misra, 2011; Parsons et al., 2009). In vocational education and training, there are various positions available for vocational trainers, such as teachers, vocational technical instructors and instructors or trainers. Many of these trainers are employed on a part-time or hourly basis. In addition, they differ from general knowledge teachers in both their recruitment routes, i.e. application and recruitment, and qualification requirements, in most cases, as vocational teachers are expected to have both work experience and qualifications related to the subject taught (Andersson et al, 2013; Fejes & Köpsén, 2014; Gleeson & James, 2007; Grollmann, 2008; Lloyd & Payne, 2012). And new entrants to the system usually acquire their formal teaching qualifications through part-time in-service training (Bound, 2011; Lucas & Unwin, 2009; Parsons et al., 2009). Accordingly, it is not always possible to distinguish between policies, strategies and requirements that are designed to maintain or develop both professional and teaching competences. There are different models of professional development requirements and organisation for vocational teachers. In addition, very little research information is available on the continuing professional development (CPD) of VET teachers, with some studies citing a very weak culture of continuous professional development among VET teachers in Europe (Parsons et al., 2009). Nevertheless, it can be argued that both the subject-specific and pedagogical competences of VET teachers play a significant role in achieving good quality VET.

The following examples from a few countries illustrate these differences.

### **Germany**

In Germany, the training of vocational teachers places a strong emphasis on professional disciplinary preparation and the combined acquisition of a teaching qualification (der Lander, 2018). The structure of the training is aligned with the vocational training and prepares students for qualifications in several subjects, allowing them to acquire a professional qualification that can be used independently and subsequently or in parallel to obtain a teaching qualification. The German system places great emphasis on combining professional experience with pedagogical skills, ensuring a balance between practical and theoretical knowledge.

### **China**

In China, the training of professional educators also takes an integrated approach, with a focus on the combined development of professional and pedagogical skills (Andersson & Köpsén, 2015; 2019). The education system is highly centralised, ensuring uniform training requirements and standards across the country. The concept of 'dual qualified teachers' means that teachers must have both theoretical and practical teaching skills. They must spend at least one month a year in an industrial environment to keep their professional knowledge up to date.

### **United Kingdom**

In the United Kingdom, training for vocational teachers is often part-time, allowing for the possibility to work and train at the same time. UK professional educators place a strong emphasis on continuing professional development (CPD) and CPD opportunities related to teaching are widely available. The system is flexible, allowing practitioners to gain teaching experience without first undergoing formal teacher training (Lloyd and Payne 2012).

### **Norway**

In Norway, vocational teachers have permanent and full-time contracts, which limits the availability of substitute teachers. Despite this, Norwegian vocational teachers are given greater opportunities to participate in CPD programmes to develop their pedagogical competences. The Norwegian system emphasises continuous professional development and lifelong learning (Lloyd and Payne 2012).

### **Finland**

In Finland, special attention is paid to the integration of practical and theoretical education in the training of vocational teachers (Frisk, 2014; Opetushallitus, 2014). The education system

supports teachers' continuous professional development and provides them with a range of CPD opportunities. Vocational teachers must have a master's degree and a pedagogical qualification related to the subjects taught. The Finnish system emphasises the importance of practical experience in education (Eerola, 2007).

### **Sweden**

In Sweden, national CPD initiatives for vocational teachers are regularly organised to update and expand teachers' professional knowledge (Fejes & Köpsén, 2014). These programmes contribute to the continuous improvement of the quality of professional education. A balance between pedagogical and professional skills is a fundamental requirement and the system is flexible, allowing for continuous professional development and the integration of work-based learning (Fejes & Köpsén, 2014).

### **Australia**

In Australia, the training of professional educators pays particular attention to the acquisition of practical experience and work-based learning (Kemmis & Green, 2013). The Australian system supports professional development through industry-specific training and programs to develop pedagogical skills (Clayton et al, 2013). Australian teachers are required to have a bachelor's degree and a teaching qualification related to the subjects taught (Wheelahan & Moodie, 2010). National CPD programs are widely available and support teachers' continuous professional development.

#### *4.1. Comparison of training and qualification requirements*

Across all EU countries, plus Norway and Iceland, a teacher qualification is a requirement in most of them, obtained either through master's, bachelor's or supplementary teacher training, which is not always an additional qualification or diploma, but merely a certificate to complement existing qualifications (Cedefop, 2022). However, for those teaching professional theoretical and theory-intensive practical subjects, a diploma (most often at master's level) and an appropriate pedagogical qualification related to the subjects taught are generally compulsory. While vocational teachers teaching practical subjects may have a university degree or a higher education qualification. In twelve EU countries, professional experience is either a requirement (Germany, Greece, France, Croatia, Italy, Lithuania, Malta, Austria, Poland, Slovenia and Finland) or an advantage (Cyprus), especially for teaching practical subjects. In six EU countries, VET teachers are required to take a qualification/certification examination

and an entrance examination/test (e.g. Germany, Greece, Spain, France, Malta, Slovenia). Greece is the only country that considers social aspects in addition to higher education qualifications and teaching experience. Social criteria are reflected in the recruitment of teachers, as "equal opportunities" points in the recruitment process, which can be awarded for: having two or more children, disability, the child's disability, etc. In addition to these, there are country-specific additional elements, for example in the Czech Republic trainees and/or professionals can only obtain an educational qualification if they are already working in schools on a part-time basis. Deviations from the general principles governing the teaching requirements for vocational education and training are also possible in Finland. In Estonia and Italy, VET teachers must also have B2 level foreign language skills. In Italy, a probationary/traineeship period of one year has been introduced for VET teachers after obtaining their teacher qualification. In Latvia, pedagogical competences can be acquired through in-service training, while in Portugal the professionalisation of teachers is based on post-graduate training and includes a post-graduate teaching certificate.

Table 1. Qualification/competence requirements by country

Qualification/competence requirement	Countries
Academic requirements (bachelor's or master's degree, subject field and pedagogical competences)	All EU+
Work experience	AT, CY, DE, EL, FI, FR, HR, IT, LT, MT, PL, SI
State examination/selection test/collective agreement	DE, EL, ES, FR, MT, SI
Foreign language	EE, IT
Practitioners/professionals teaching in schools	CZ, IT
Flexibility (exceptions)	CZ, FI
Social criteria	EL
Probation	IT
CPD	LV
Subsequent supervised practice	PT

In Germany and Finland, the training requirements for vocational teachers are closely aligned with vocational education, while in Hungary the training structure is more theoretical. In Germany, teachers are prepared for qualifications in several subject areas (der Lander, 2018), while in Finland, the aim is to integrate practical and theoretical training (Frisk, 2014; Opetushallitus, 2014). In Australia, similar requirements are placed on vocational flexible framework (Clayton et al, 2013). In Hungary, the acquisition of professional and pedagogical qualifications is also important, but the integration of practical training elements needs to be improved.

#### *4.2. Presence of continuous professional development (CPD)*

The fact that vocational teachers, like other teachers, are expected to be knowledgeable in the subject they teach also means that they have a professional identity related to their subject. However, changes in the world of work and the modernisation of vocational education and training are placing new demands on the competences of vocational teachers (Parsons et al., 2009). VET teachers need to have a current professional identity, which includes the knowledge and skills needed to practise their profession in a way that meets current expectations. One way to maintain a high-quality professional identity is for trainers to remain connected to their field. In this way, the professional subject taught becomes an active participant in professional development activities through contact with the community of practitioners, and thus a useful and beneficial source of development. However, the aims and circumstances of vocational education and training differ from country to country. Thus, it is likely that the needs for dual competence differ among vocational teachers and the conditions for their continuing professional development, i.e. their current possession of a professional identity, also differ (Fejes & Köpsén, 2014).

The work of a vocational teacher is based on two main competences: a competence related to teaching, i.e. pedagogical competence, and a competence related to a specific profession, i.e. experience and knowledge. Therefore, VET teachers consider the continuous interaction between VET and work to be essential to their work. As this interaction is an essential part of vocational subject teaching, VET teachers face specific requirements (Berner, 2010; Vähäsantanen et al., 2009; Tanggaard, 2007). According to Tanggaard, VET teachers play a crucial role in linking the different sociocultures of work and school in a way that promotes the success of VET learners. In other words, vocational teachers need to be competent in both sociocultures (Fejes & Köpsén, 2014). Thus, these teachers need to have the knowledge and

skills to teach and to engage in the everyday, contemporary (modern) practice of the profession. In other words, subject teacher identity is based on both professional identity and teacher identity; thus, the dual professional identity of subject teachers should be treated as a core element.

In the UK and Sweden, Continuing Professional Development (CPD) is central to the training of professional educators, while in Hungary the availability and support of CPD programmes is still an evolving area. In the UK and Sweden, CPD initiatives are often organised at national level and are widespread. In Norway and China, there is a strong emphasis on continuous professional development, including regular industry training and CPD. In Australia, CPD programmes focus on industry-specific training and work-based learning. In Hungary, professional development is also important, but the integration of industry training and regular CPD needs to be further developed.

Therefore, in order to have the necessary knowledge to teach the subject, teachers need to have a professional identity related to the subject and the pedagogical knowledge and skills to deliver professional practice. In their research, Fejes and Köpsén (2014) emphasised the dual role of professional educators, highlighting that an important part of professional educators' identity formation is the practice of the profession and the combined application of their experience in teaching. The emphasis on these may be mixed, with some students preparing to become vocational teachers emphasising their teacher identity, while others placed greater emphasis on their professional identity. As Robson et al (2004) found, vocational teachers see themselves as the "gatekeepers" of their profession and focus on teaching their own views of their profession to their students, based on their professional experience rather than strictly following the curriculum.

#### *4.3. The role of institutional support*

In Norway and Finland, institutional support is strong, particularly in the area of developing pedagogical competences. In Norway, teachers' permanent employment and full-time working hours limit the availability of substitute teachers, but their access to CPD programmes is significant. In Finland, the education system supports teachers' continuing professional development and provides a range of CPD opportunities. The UK and Swedish systems offer flexible support structures for vocational teachers, including ongoing mentoring and professional development opportunities. In Australia, institutional support includes industry

partnerships and work-based learning programmes. In Hungary, institutional support needs to be developed, particularly in the areas of CPD programmes and apprenticeships.

## 5. Summary and recommendations

The topic of double identity was verified with the following overview: with the investigations of Brennan Kemmis and Green (2013), who, when analysing the ideas of Australian vocational teachers about pedagogy, showed the dual identity, which was confirmed by Fejes and Köpsén (2014) because of a strong attachment to the workplace and profession. Farnsworth and Higham (2012) focused on the modification and hybridization of the identity of vocational educators, among vocational educators who replaced the practice of their initial profession with the practice of vocational training. While Vähäsantanen et al. (2009) analysed the experiences of vocational teachers in a Scandinavian context regarding the reform aimed at better interaction between schools and workplaces. This investigation highlighted that border crossings between school and work can be valuable from the point of view of the professional development of vocational teachers and the development of education adapted to the world of work.

The Eurydice studies (OECD, 2021) classify Hungary as one of the countries with the worst situation in terms of the supply of teachers, where at the same time the proportion of teachers over 50 is high and the number of beginning teachers is also low, which suggests that the shortage of teachers promises to be long-term. if there is no immediate intervention. As a result of the changes in the Vocational Training Act, vocational training teachers are not necessarily teachers with a teaching qualification, whose number has decreased significantly since the start of training according to the Bologna system. In vocational teacher training, in 2021, the launch of vocational teacher training was a new opportunity for many institutions, which, in addition to playing a strong role in filling the gap in the supply of teachers, also offers the possibility of a new "second career" for vocational training specialists and those with a professional qualification in education. for those with perspective.

The study provides a theoretical approach and background to the topic, and aims to grasp the interpretation, role and potential of dual identity. It outlines the range of both international theories and practices. &The development of both professional and pedagogical identity is a lifelong process (Tiedemann & O'Hara, 1963; Kersting, 1996), during which the individual continuously integrates the experiences gained while practicing the profession into his professional identity. One of the important tasks of teacher training is to develop commitment to the field. Our analysis also pointed out where the responsibility of trainers can be found in

this process and how we can contribute to a successful and effective career socialization process.

### *5.1. Recommendations for Hungarian vocational teachers:*

Below, along the lines of international comparisons, we formulate some suggestions that can be useful for Hungarian vocational education teachers (vocational teachers and vocational teachers) in terms of identity and career socialization and draw the attention of educational institutions to the importance of professional identity formation.

#### 5.1.1. Integration of practical training elements

The possibility of gaining practical experience should be increased in training programs, similar to the German and Finnish systems. Through the example of the training system in Germany, we can observe that practical experience is closely integrated into the curriculum, which allows students to directly apply the knowledge acquired in theory. The dual training system, based on close collaboration with industrial partners, ensures that students can gain experience in a real work environment while receiving formal education.

In Finland, practical training is also given priority, and teachers often work in industrial settings to have up-to-date knowledge in their field. This type of integration promotes the development of students' skills and qualifies them according to the needs of the labour market. In Hungary, it would be necessary to introduce similar training structures that would enable students to gain valuable practical experience already during the training, thereby better preparing them for the world of work.

#### 5.1.2. Continuous professional development (CPD) support

Nationally organized and supported continuous professional development (CPD) programs such as those found in the UK and Sweden should be introduced. The wide availability and support of CPD programs in the UK ensures that vocational teachers can continuously update their knowledge and develop their teaching skills. In the English system, CPD programs are often centrally organized and implemented in cooperation with educational institutions, so that all teachers have access to these opportunities.

In Sweden, continuous professional development is also given priority, and thanks to national initiatives, teachers can regularly participate in further training and professional conferences. These programs contribute to ensuring that teachers have up-to-date knowledge and to learn

about and apply best practices. In Hungary, there is also a need to develop and introduce this type of CPD programs at the national level, which enable vocational teachers to continuously develop and adapt to the rapidly changing labour market needs.

#### 5.1.3. Strengthening institutional support

In order to develop institutional structures, it is necessary to ensure continuous professional development and mentoring, as in Norway and Finland. Institutions in Norway have strong support systems that allow teachers to continuously develop and receive professional support. Permanent employment and full-time employment ensure that teachers are committed to professional development in the long term.

In Finland, institutional support includes regular mentoring and continuing education opportunities. Educational institutions are actively involved in supporting the professional development of teachers and offer various programs for the development of pedagogical skills. In Hungary, there is a need to strengthen institutional support, especially in the field of continuous professional development and mentoring, so that teachers are committed in the long term and have up-to-date knowledge.

#### 5.1.4. Development of industrial collaborations

Encouraging closer collaboration with industry partners to support practical training opportunities and work-based learning as in Australia. One of the greatest strengths of the Australian system is the close collaboration with industry partners, allowing students to gain practical experience directly in industry. This type of cooperation helps to ensure that training programs remain relevant and meet the current needs of the labour market.

In Australia, industry partners are actively involved in the design and delivery of training programs, ensuring that students gain practical experience and up-to-date knowledge. In Hungary, there is a need to establish similar industry collaborations that enable practical training to be integrated into the curriculum and ensure that students have relevant skills when they enter the labour market directly.

#### 5.1.5. Introduction of flexible training programs

The development of part-time and part-time training programs so that vocational teachers can more easily develop their knowledge and skills. In the UK and Australia, part-time and part-time training programs allow vocational teachers to continue their work while further training.

These programs are flexible and allow teachers to progress at their own pace, considering their work schedules and other commitments.

The great advantage of these types of training programs is that they enable professional educators to continue learning and developing without interrupting their careers. In Hungary, there is also a need to introduce similar flexible training programs that enable vocational teachers to continue their training while working and thus have up-to-date knowledge and skills. Programs of this type can contribute to increasing the commitment and motivation of vocational teachers, as well as to improving the quality of professional education.

## 6. Conclusion

The study presented international examples of the training and development of vocational teachers and compared them with Hungarian practice. In the examined countries - Germany, Finland, the United Kingdom, Sweden, Norway, China and Australia - different but equally successful approaches are used in the training of vocational teachers and in supporting their continuous development. The experiences and best practices from these can serve as a useful guide for the development of Hungarian professional education.

The dual education system in Germany is an excellent example of how practical experience can be integrated into formal education, which directly serves the preparation for the labour market. The Finnish model shows that, in addition to practical experience, the continuous presence of teachers in an industrial environment is also essential to ensure up-to-date knowledge. The examples of the UK and Sweden emphasize that supporting CPD not only benefits teachers but also the education system as a whole.

Based on the results of the study, we made several development proposals that provide guidance in various aspects for improving Hungarian professional education. The primary recommendation is the integration of practical training elements, which would allow students to gain direct experience in industry while receiving formal education. This approach not only improves students' abilities, but also better meets the expectations of the labour market.

Supporting continuous professional development is also crucial in Hungary, as teachers must be provided with the opportunity to continuously update their knowledge and develop their skills. The introduction of CPD programs organized and supported at the national level can ensure that all teachers have access to these opportunities, which in the long-term results in an improvement in the quality of education.

Strengthening institutional support is also essential. Institutions must develop structures that support the continuous development and mentoring of teachers. The examples of Norway and Finland show that strong institutional support contributes to maintaining teachers' commitment and professional development.

The development of industry collaborations is extremely important for practical training and workplace-based learning. The example of the Australian model shows that close cooperation with industry partners not only enriches the students' practical experience, but also increases the relevance of the training programs, as they can receive direct feedback on the current needs of the labour market.

Finally, the introduction of flexible training programs offers teachers the opportunity to further their education in addition to their work. Such programs allow teachers to progress at their own pace, considering their work schedules and other commitments. Examples from the UK and Australia show that flexible training opportunities increase teacher engagement and motivation.

In summary, the development proposals made based on the international examples and the results of the study can all contribute to ensuring that high-quality, well-prepared vocational teachers educate the professionals of the future in Hungary as well. Integrated training programs, support for continuous professional development, strengthening of institutional support and promotion of industry collaborations can all contribute to improving the quality of professional education in Hungary. The implementation of these types of reforms not only benefits teachers and students but can also increase the competitiveness of the entire economy by providing a better-educated and prepared workforce for the labour market.

For VET teachers, it is not enough just to deepen their professional or pedagogical knowledge. In order to support the effective development and maintenance of a dual identity, mentoring and training programmes should be introduced by educational institutions to specifically promote a balance between the professional and pedagogical roles of vocational teachers. For example, for teachers with industrial experience, there should be a need for continuous professional development to ensure that their practical knowledge is kept up to date, while pedagogical training should also be a priority to enable teachers to effectively transfer their knowledge to students.

Closer cooperation between industry and education could also help to strengthen professional identity. Programmes should be developed to enable teachers to return regularly to the field of practice of their profession, updating their professional knowledge and their contact with the

real challenges of the industry. Such integrated training elements can help to make teachers more successful in both their professional and pedagogical roles.

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