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The evolution of vocational education and training in Hungary and Poland 1989–2035

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RESEARCH ARTICLE

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ABSTRACT

The article uses a multi-faceted approach to present the major challenges to vocational education and training (VET) that Hungary and Poland have been facing during the transformation of their economic systems in 1989 and integration into the EU in 2004. The evolution of VET is examined according to historical traditions, its declining prestige, the introduction of dual training, governance, and the involvement of social partners. We also look at recent changes in the two countries as a result of the COVID-19 pandemic and discuss the current situation in the light of VET scenarios recently developed by Cedefop.

KEYWORDS

vocational education and training (VET), transformation, new scenarios, Central and Eastern Europe, Poland, Hungary

INTRODUCTION

The social and economic changes initiated at the turn of the 1990s had a great impact on the education systems of the former socialist countries. Although different privatization policies had been employed, the discontinuation of corporate internships and training workshops, tackling

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mass unemployment, and organizing retraining courses for those affected became an extraordinary task for initial VET and adult education in all former socialist countries. 'In the last few decades, economic liberalization has spread across the former socialist region at a higher pace than in the world …' (Porčnik, 2019). Accession to the EU, the economic crisis and recently the COVID-19 pandemic have changed provisions for VET in all countries of Central and Eastern Europe (CEE).

Based on a critical analysis of national literature and discussions at various conferences[1] our article presents the increasing challenges faced by VET in Hungary and Poland by discussing the following issues: historical traditions, declining prestige, governance, the involvement of social partners, and the introduction of dual training. Furthermore, we discuss the effects of the COVID-19 crisis on VET and the relevance of recently published European VET scenarios (Cedefop, 2020) for the two countries. The selection of topics is based on previous research on VET and on adult education in Hungary (Benke, 2008) and follows a request by Gábor Halász: '…The whole educational process is part of a complex social problem-solving mindset that assumes that we need to think about social issues in multidimensional complex systems, that is, we need to see that a wide range of actors, interests and alternatives emerge and need cognitive and emotional treatment as well' (Halász, 2005: 69).

Poland and Hungary were ranked among the most successful implementers of reforms at the beginning of regime change (Kozenkow, 2011). On the other hand, the economic structure, the nature of post-regime privatization, and VET policy differ in the two countries, making them interesting cases to compare.

Research on VET in Hungary and Poland has only recently received more attention with a stronger critical voice. It had deteriorated strongly after the regime change and practically fell out of sight in sociological research in education (Kozma, 2021).[2] Likewise, many forums for debate among VET actors disappeared.[3] In this sense, this article should also be understood as an invitation to re-establish scholarly informed debates among VET stakeholders in the two countries.

HISTORICAL VET TRADITIONS

In Hungary, VET has rich traditions dating from the last century. The structure of the economy and manufacturing industry, including the manufacture of machinery and the production of

[1]For Poland, also an in-depth interview with the headteacher (and previously long-time deputy head) of a large vocational school in Kraków (southern Poland) was carried out in February 2021 to better understand the situation at the school level.

[2]While in the 1970s and 1980s, in the context of youth sociology, a number of outstanding authors (Ferge 1972, Gazsó 1982) addressed the state and conditions of VET, this situation has steadily deteriorated since the regime change. Also in Poland, for many years during the transformation period, the condition of VET ceased to be as popular among researchers as before.

[3]As a non-governmental organization, the Hungarian VET Society was abolished. The VET (*Szakoktatás*) professional magazine was closed down, while VET Review (*Szakképzési Szemle*) has not been published for several years and previous issues are difficult to access. Similarly, in Poland, magazines devoted to VET have ceased to be published, e.g. Vocational School (*Szkoła Zawodowa*). The attempt to publish "New VET" (*Nowa Edukacja Zawodowa*) at the beginning of the 21st century also ended in failure and publishing of the journal was suspended after several years.

various means of transport and their components, led to an industrial world in which apprenticeship training was customary. In Poland, the situation of VET in the 20th century was specific because, after regaining independence in 1918, there were three different education systems on its territory. The big challenge in 1918–1939 was therefore to rebuild them into one common education system, and this was too short a period to build strong VET traditions. Therefore, the education system and economy that were built in the years after the Second World War, based on socialist ideology, had the greatest impact on the situation of VET around 1989.

In the period of the centrally controlled (socialist) economy in both countries VET focused mainly on the training of workers for large industrial plants resulting from economic policy priorities. Intensive industrialization based on the development of heavy industry (Rachwał, 2015) was dominant in Poland.

Between 1970 and 1990, a quasi-dual system based on cooperation between companies and schools operated in Hungary, in which approximately half of all students obtained vocational qualifications mainly through corporate internships representing traditional industry and agriculture (Benedek, 2003, 2018).

In a period of central planning and full employment, companies' unquenchable hunger for labour could not be met by vocational schools. Several large-scale attempts were made in Hungary to reduce the aversion to industrial work and to make youth VET more attractive (Gyekiczky, 1985), but they did not produce the results desired. The drop-out rate was very high in VET schools. At the same time, school-based VET had to face the danger that quality would only increase if, in return for support, greater concessions were made to companies to advance their own interests. While public education policy guidelines and party resolutions emphasized an increase in the wide-ranging general education of young people, some ideas for VET development in Hungary stated that in order to acquire knowledge in a more direct corporate environment even first-year vocational students could be employed working on production lines. Economic reform efforts in both countries and the 'New Economic Mechanism' in Hungary tried to find a solution to the contradictions of the system, without achieving breakthrough success.[4]

The change of regime[5] in 1989–90, privatization, the restructuring of state-owned enterprises, and the necessary but slow transformation of the economic structure hit the economy and society hard. The implementation of a market economy in many cases meant the collapse or a significant reduction in the production volume of large industrial enterprises. The mechanism implemented in changing regime was different in the two countries. Poland where, unlike some other CEE countries, the shock therapy model was implemented, changes took place quite

[4]However, over time the socialist economy became more and more open to private entrepreneurship (although to a limited extent), therefore the VET system in the 1980s was more open to craft professions from the private sector than between the 1950s and 1970s.

[5]The reform attitudes of the population of the two countries still differed significantly at the beginning of the regime change. At the start of the process, Poles were largely supportive of radical action (Bönker, 2006, quoting; Kozenkow, 2011), but after the introduction of shock therapy, Polish society shifted from supporting radical reforms to a gradualist approach. In Hungary, on the other hand, the population has been a committed supporter of gradualism throughout. According to experts, this gradualist character can be seen as 'a path-dependent outcome of a long, two-decade-long reform process that led to the 1989 political changes' (Benczes, 2010: 126; quotes; Kozenkow, 2011).

quickly. There was no need to educate such a large workforce in VET in conditions of high unemployment, and this mainly affected occupations related to mining (Stańczyk, 2013) and traditional industry. As a result, companies had to implement intensive restructuring programmes. In numerous cases they faced organisational and financial difficulties which ended their involvement in co-financing VET (Kurek & Rachwał, 2012). The model of a general secondary education became popular in order to continue studies, mainly in humanities and social sciences. These processes also resulted in the limitation of VET and were often reflected in the closure of basic vocational schools, especially company schools, in the 1990s (Nowak, 2017). Large state-owned enterprises were closed in the 1990s, so were the vocational schools functioning alongside them. Moreover, VET seemed to be too expensive and held no future for Poland's economic development (Dębowski & Stęchły, 2015). Due to the lack of investment and modernisation, VET could not provide the skills needed for emerging high-tech industries following the influx of foreign investors and the development of new private enterprises.

In this situation, many young people believed that VET had no future. The interest of candidates and the prestige of vocational schools began to decline (Kurek & Rachwał, 2012; Pasierbek, 2011), which is still largely visible today. Reegård and Dębowski (2020) confirm this conclusion – according to them VET suffers from a disparity of esteem compared to academic education, despite governmental activities to change its negative image.

In Hungary, the process of transformation had been protracted and accompanied by a deepening economic crisis[6] (Velkey, 2011). During the conversion of the economy, Hungarian VET had to face the challenge of lacking skills that require modern techniques. Both in the schools and the corporate workshops the machinery was outdated and technically obsolete. As 80–85% of the practical training of apprentices was carried out in companies, maintaining and strengthening corporate interest in VET was a key task. Thousands of apprentices lost their corporate internships and vocational schools tried to replace these through school workshops, sometimes at a tremendous cost. As some sectors almost completely disappeared in a very short time, it is understandable why evaluations around the 1990s showed the need for training places across sectors and companies in Hungary (Benke, Forray, & Kozma, 1990).

Researchers suggested that education which prepares young people for becoming 'wage workers' should be replaced by education to prepare for more complex and diverse roles, and that pressure from the economy on VET should be counterbalanced. With particular regard to the high proportion of disadvantaged young people, researchers also recommended that the framework for school-based VET should also be designed to address the protection of youth, and balance the social and economic considerations (Benke et al., 1990).

The task of preparing CEE countries for the accession to the European Union in 2004, and the accession itself, such as formulating National Development Plans, have drawn attention to the management of human resources, including the importance of the conditions and development of education and VET. Following the accession, partly due to significant wage differentials, there was remarkable outflow of qualified employees from the new member states to Western European labour markets, from Poland to a greater extent than from Hungary. In Poland a gap had arisen in VET as there was a shortage of many specialists in specific occupations, especially those related to the construction and electronics (electrotechnical) industries.

[6]While the need for economic structural changes was clear and undisputed, its direction was uncertain.

The historical conditions related to the functioning of both countries under socialism and strong industrialization in the second half of the 20th century greatly impacted the shaping of VET after 1989. The sudden shift of regime towards a market economy posed a huge challenge for VET and made it necessary to redefine its role in the new socio-economic conditions and to reject the 'ballast of the past'. However, VET was developing differently in Hungary and Poland in the 1990s. In Poland, because of the rapid shock-therapy, a higher proportion of heavy industry and a higher level of unemployment the devaluation of VET and in parallel an increased appreciation of general education appeared to a greater extent than in Hungary which experienced a protracted transformation. In Poland around 1990, the liquidation and closure of vocational schools took place on a larger scale than in Hungary.

THE DECLINING PRESTIGE OF PHYSICAL WORK AND VET AMONG SECONDARY EDUCATION AND TRAINING INSTITUTIONS

There is a close relationship between knowledge conveyed by initial VET and the vulnerable social situation of young people leaving VET (Marhuenda-Fluixá, 2017). The lower the social status of the profession, the lower the prestige of the school and the more vulnerable are its students on the labour market.

The prestige of VET in the light of enrolment data has long been a critical point of Hungarian VET. Within the framework of the market economy, which replaced the state of the working class, the situation of manual wage workers has inevitably changed, and the prestige of VET preparing for this work has deteriorated even more than before. The government introduced measures that seek to make VET more attractive to young people through various 'facilitation measures' such as reducing general education, and the 'simplified' content and delivery conditions for VET (Horn, 2014; Kunert, 2016; Mártonfi, 2019). As a result, young VET graduates do not have the basic knowledge that would be essential to successfully adapt to the demands of an uncertain future. Obviously, the government's above facilitation attempts to raise the prestige of VET in Hungary have failed as enrolment figures for the last three decades show (compare Figs 1 and 2).

According to data there has been a gradual increase in the number of general secondary schools between 1990 and 2010 after which it has stayed at that level. On the contrary, concerning VET schools, since 2010 the decline has been most pronounced in VET schools with larger rolls. In terms of student numbers, there was only an increase in general secondary schools (Fig. 1). In terms of proportions, the strengthening of general secondary education is even clearer (as seen in Fig. 2).[7]

The employment rate of recent VET graduates at 86.3% in 2019, exceeding the EU average (79.1%). However, vocational schools' limited general education content has been problematized (Horn, 2014; Mártonfi, 2019). Together with the concentration of students with low socioeconomic status, explains the heavy deficit in basic skills measured in PISA and high drop-out rates:

[7]The continuous restructuring of the institutional system of secondary level education and training may, in our view, somewhat call into question the absolute accuracy of the above data.

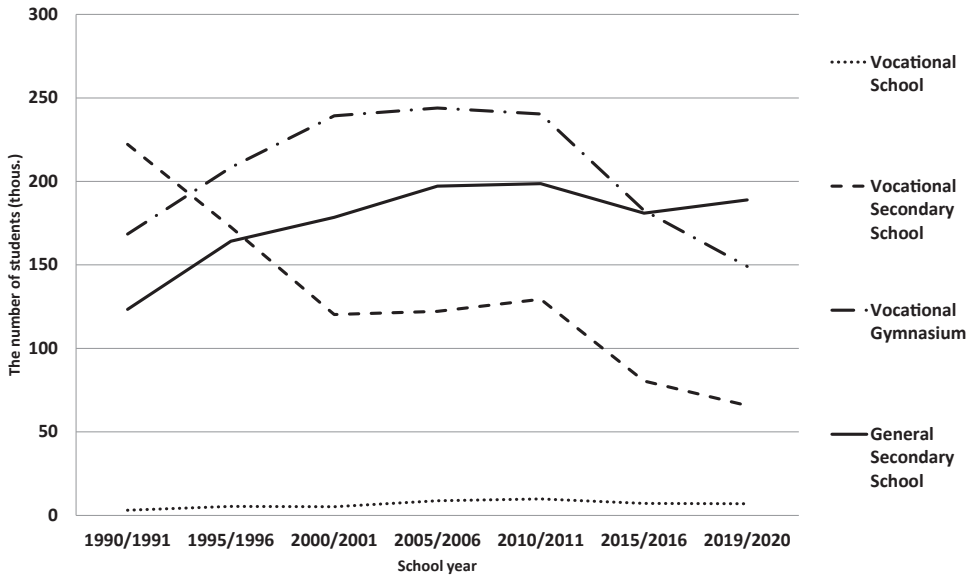

Fig. 1. Number of students in post-elementary full-time education by type of school in Hungary (1990–2020). *Source*: Authors based on data from the Central Statistical Office of Hungary

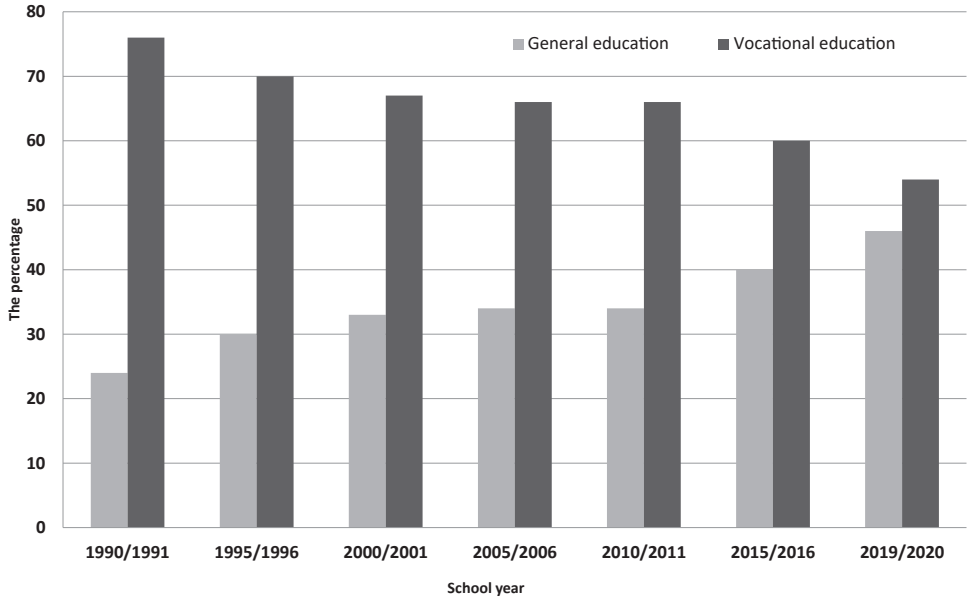

Fig. 2. Percentage of students in vocational and general post-elementary schools in Hungary (1990–2020). *Source*: Authors based on data from the Central Statistical Office of Hungary

in 2016 in the lower level of VET drop-out rate was 15.3%, against 6.5% in the higher-level form, and 1.1% in general upper-secondary schools (Varga, 2018).

The outputs of a survey of heads of institutions (see Garai, 2009) presented the gradual decrease in the number of children with increased competition between schools for their enrolment. As a consequence the imposition of ever lower requirements has resulted in vocational schools being characterized by students with weaker abilities (Garai, 2009). Mártonfi (2019) points out too that the 'lower branch' of secondary VET suffers from a permanent loss of popularity and is increasingly lagging behind in competition. In Hungary the impact of pupils' socioeconomic background on education is the strongest in the EU. The impact of school type is also very significant, reflecting early selection in secondary education (European Commission, 2017; Bükki, 2019).

Since the beginning of the 1990s a decline in the prestige of VET has been observed in Poland, too. According to Kwiatkowski (2015), the position of physical work at the bottom of the social hierarchy is usually correlated with a low level of work ethic and this causes a reluctant attitude towards VET. In addition, in his opinion, in the initial period of transformation, this attitude was perpetuated by economic and educational decision-makers who blamed VET for high unemployment. Kabaj (2010) claims that the 1999 reform was supposed to lead to a significant limitation of VET at the secondary level, which was according to some policy-makers 'unnecessary' in the modern knowledge-based economy. Secondary vocational schools are still largely second-choice schools in Poland (Pasierbek, 2011; Urbanek, 2013). Thus, official international reports on the status of VET in Poland, pointed out that basic vocational schools are becoming less popular (Chłoń-Domińczak et al., 2016). However, the increasing market awareness from the young in recent years also led to a growing interest in VET. This is not the effect of a change in the hierarchy of values or the prestige of schools, but the result of rational self-assessment and the possibility of finding a job in the domestic or European labour market (Kwiatkowski, 2013, 2015). However, this renewed interest in VET was not enough to reverse the overall trend.

The number of VET schools in 1989–2020 was volatile, resulting from various types of organizational changes and the closing of many (especially in 2000–2010), but the general downward trend after 1990 has proved to be persistent. Similarly, the trend of a significant decrease in the number of students in VET schools was observed (Fig. 3). The fall in the proportion of these students is unstoppable (Fig. 4), although the rate of decrease has slowed down in recent years. It has also been influenced by demographic decline which in Poland, like Hungary and other countries in Europe, is characterised by low birth rates resulting from an older population (Chłoń-Domińczak et al., 2016). As the number of those at school-age falls in both countries, it makes it even more difficult to increase student numbers in VET schools.

After the change of the regime, the Polish education system became more 'general', while the Hungarian retained a relatively strong VET which later became increasingly practice-oriented, However, focusing on upper secondary education, according to data, by 2021 upper secondary general education had become more popular in Hungary compared to Poland. In 2021 in Hungary the percentage of students enrolled in upper secondary general education was 56%, compared to Polish data of 47.5%. This may suggest that Polish secondary vocational institutions with well-equipped school workshops may have been recently more attractive for VET candidates than Hungarian institutions. Despite the decline, the number of Polish VET students

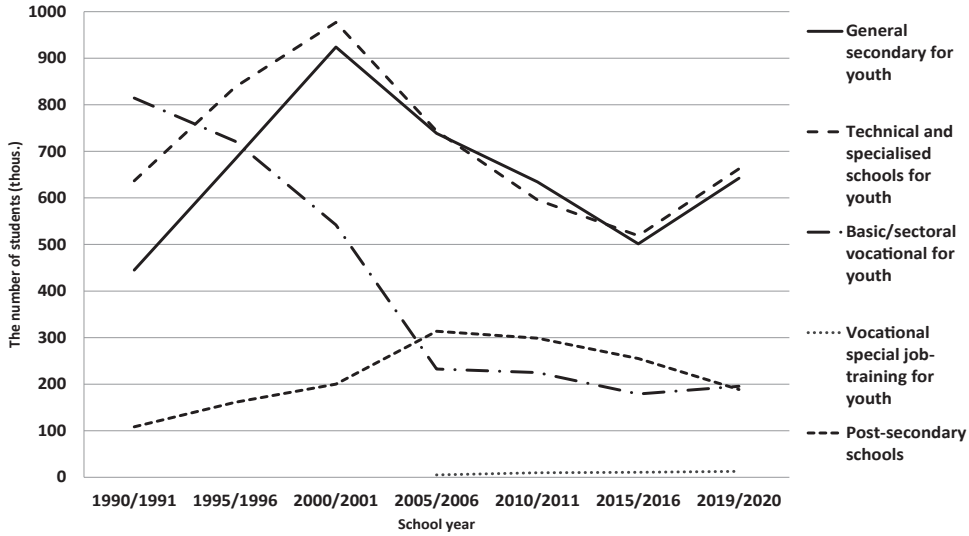

Fig. 3. Number of students in post-elementary education by type of school in Poland (1990–2020). *Source*: Authors based on data from the Central Statistical Office of Poland

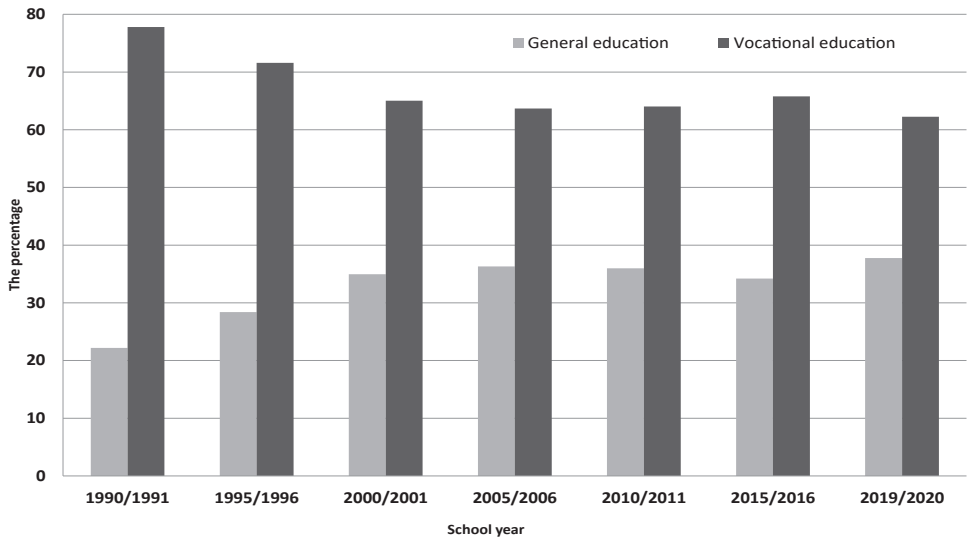

Fig. 4. Percentage of students in vocational and general post-elementary schools in Poland (1990–2020). *Source*: Authors based on data from the Central Statistical Office of Poland

(more than 660,000) is still by far the highest in Central and Eastern Europe, and is outstanding and among the highest in the EU, headed only by Germany, France and Italy.[8]

GOVERNANCE IN VET

Following the change of regime on the basis of the acts passed in 1991 and 1993, a rapid and consistent education decentralization process took place in Hungary. The vast majority of previously state-run schools were maintained by local authorities resulting in a decentralized system. With the enactment of the 1994 Chamber Act, the MKIK (Hungarian Chamber of Commerce and Industry) was in a privileged position with regard to Hungarian VET, and its informal and then formally strengthened position lasted until recently. Since the system of VET institutions had become extremely fragmented[9] in Hungary, around 2003 the nature of policy-making changed completely: the government forced VET institutions to associate with one another in order to make the institutional system more efficient. In this sense institutional development was replaced by large-scale central development programs. Between 2005 and 2008, the system of TISZKs (Regional Integrated VET Centres) was formed, in which 86 organizations represented six different models.[10] In 2011, the new 'conservative' majority government passed an Act on National Public Education (replacing the law on Public Education) (Velkey, 2013), and a new law on VET. According to some experts, the new laws were followed by 'all-pervasive centralization, a shift to administrative bureaucratic and political control, and the termination of the organizational, fiscal and professional autonomy of schools' (Radó, 2021: 77). The new government abolished the TISZK system in 2012 and in January 2013, all schools previously maintained by local authorities were taken over by the state.[11] In 2015, NGM (Ministry of National Economy in Hungary) responsible for VET took over the maintenance of VET schools from the Ministry of Education. The number of these schools was also to be radically reduced, based on a review of their training profiles. Hence the NGM concentrated 380 VET institutions into 44 VET centers (SZC) on a territorial basis. Schools were subordinated to integrated training centers 'for simple, transparent, fast and efficient management' (opinion of the MKIK). For the time being, their level of autonomy and of the individual schools within them, is questionable. In Hungary currently, VET operates under the governance of the Ministry of Innovation and Technology. According to a recent research paper, in this centralized management system, a connected institutional, local and regional mid-term strategic planning system is completely missing (Radó, 2021).

[8]Eurostat Data Browser (2021).

[9]Similar processes took place in Poland.

[10]For the most part, cooperation between institutions was only formal, and they barely functioned as training centers (Mártonfi, 2016).

[11]As Radó (2021:120) says, by the new legislation in 2011, 'a complete education system reshuffle was implemented by 2015 that has created the most centralized education management system in Europe'.

VET transformations in Poland have been strongly influenced by educational reforms[12/13] both organizational and curricular. Following the typology developed by Pilz (2016), the Polish VET system is characterised by Reegård and Dębowski (2020) as a state-regulated, highly stratified, highly standardised system, with low levels of experience of labour market practice. We can assume that the problems of Polish VET are related to a lack of good governance at different levels. As a result of the 1999 reform favouring general education, both national and local authorities (as school governing bodies) placed less emphasis on strategic management of VET. Only the gap in the labour market, which appeared a few years after Poland's accession to the European Union when unemployment had fallen significantly following a period of economic recession, drew attention to the need to educate staff in VET schools. Moreover, in the wake of EU enlargement in 2004, Poland became one of the biggest supplier of skilled labour to Western Europe[14] (Reegård & Dębowski, 2020), with the best VET graduates usually going to Germany or the UK. These massive outflows of skilled labour, not compensated by adequate inflows of equally skilled workers, have led to serious skills shortages, especially in the construction sector, and became a major challenge for VET governance in Poland. Therefore, the development of a strategy for 'rebuilding' VET has begun. Regional and local authorities have started developing education development strategies in their areas. Reegård and Dębowski (2020) mentioned that after years of inattention, VET has been regaining a stronger position in national policies.[15] 2017 was the beginning of fundamental changes in Polish education, and the implemented reform also covered VET in the wider sense, a priority for the Ministry of National Education (Nowak, 2017). Currently, intensive activities coordinated by the Ministry of National Education (from 2021 Ministry of Education and Science) are carried out, aiming at adapting the VET system to the needs of the modern economy, including the development of dual education. Building close cooperation[16] between VET schools and local entrepreneurs is a way of promoting VET and raising its social prestige in society (Nowak, 2017). Regional authorities have started to implement EU projects for supporting VET in the regions. However, according to research (Dolinska et al., 2019; Schröder et al., 2020) cooperation between educational institutions, politics and companies is still insufficiently institutionalised at regional and national levels. Nevertheless, unlike the Hungarian experience, the political change in Poland did not lead to a major turnaround. Referring to Jakubowsky (2021) Radó (2021:112) points out that 'all

[12]The VET system has not been stable for years. Until 1999, it was based mainly on a 3-year basic vocational school or a 5-year technical school which prepared students for a profession and for passing the *matura* (school leaving) exams (Kurek & Rachwał, 2012). The reform of the education system initiated in 1999, introducing a 6-year elementary school and a 3-year lower secondary school (*gimnazjum*) to replace the 8-year elementary school, shortened education in vocational schools by one year.

[13]By this 1999 reform, VET had to give place to general education. This was to increase the schooling rate at higher levels of education and, as a result, the percentage of the population with higher education (Kurek & Rachwał, 2012).

[14]At the same time Poland had to open up to foreign workers (mainly from Ukraine) due to the lack of workers in many occupations. However, the inflow of skilled workers was too small to meet the Polish labour market needs.

[15]According to Nowak (2017) VET has recently experienced a real 'renaissance' in Poland.

[16]As good examples, Reegård and Dębowski (2020) found that construction companies are mostly more willing to take on students for practical training and they contribute to improving school equipment. Their employers saw no other option than to continue investing in training young learners, so the cooperation between schools and companies is still growing.

those institutional settings that allow for the rather successful decentralized governance of the Polish education system remained in place'.

In conclusion, VET governance at different levels constantly raises important questions in both countries. In Hungary the topic focuses around the issue of centralization and decentralization, while in Poland it is around the issue of rebuilding VET.

THE INVOLVEMENT OF SOCIAL PARTNERS IN SHAPING VET

While in the more developed Western and Northern European countries social partners have traditionally played a significant role in the modernization of VET (Benke, 2001), in Hungary the debates over the legitimacy of trade unions distracted attention from the importance of their role and mission in VET and adult training. After the change of regime, the role and influence of social partners was transformed. Conciliation institutions had been established to ensure a wide-ranging dialogue between economic actors and the National Council for Training and the National Council for VET discussed a number of topics that affected VET. These were followed in 2001 by the Regional Development and Training Committees (RFKBs), which had been operating at a 'county' level for several years under the title MFKB (County Development and Training Committee).[17]

The examination of the role of the social partners in VET, the significance of this topic and analysis of social dialogue in general had been intensified in Hungary during the period of accession to the EU. The preparation of national development plans, including human resources and VET, have played a significant role since this time, serving the purpose of involving the widest possible range of stakeholders before each development decision (Benke, 2002). Although the involvement of the social partners in the decision-making related to VET development according to official reports is mandatory by law, they do not seem to appear in substance in the policy-making process; in many cases, they are only present on paper or only formally (Benke, 2008). The opposition of social partners to the priority of economic considerations remains therefore unemphasized, powerless. In general, reconciliation of social interests with the enforcement of the principle of partnership is very underdeveloped in Hungary (Benke, 2008, 2019) which, by implication, also affects social groups with weak advocacy such as apprentices. Complicating the situation is the fact that there is little domestic research on this subject.

The participation of social partners in shaping VET in Poland is mainly concerned with employers' associations and, to a lesser extent, trade unions.[18] Schools usually cooperate directly with employers. However, poor cooperation is evidenced by the fact that the Supreme Audit Office[19] (the most important inspection body in Poland), as a result of an audit of the VET system[20] in 2015, requested establishing cooperation with local employers in order to identify local labour market demand for specific occupational sectors, and launching education courses

[17]According to research opinion, committees coordinated by MKIK played a significant role in pushing non-state and non-church maintainers of VET institutions out of the training market (Mártonfi, 2019).

[18]The central body of the Social Dialogue Council (formerly Tripartite Commission for Socio-Economic Affairs) operates, but not in connection to VET.

[19]In Polish: *Najwyższa Izba Kontroli*

[20]See: https://www.nik.gov.pl/plik/id,11897,vp,14269.pdf.

to address those needs. This was a response to employers' complaints about the unsatisfactory quality of VET and one of the reasons for this audit.

Unfortunately, like in Hungary, there is no extensive research in Poland on the effectiveness of cooperation with social partners.[21/22] Nevertheless, we would like to draw attention to research mentioning partnership in relation to VET in our countries. A study of the European Commission (2019: 3) on the representation of apprentices in VET and training and other relevant bodies or networks points out that 'no relevant structures have been identified in Bulgaria, Hungary, Malta, Poland,[23] Albania or Montenegro'.

THE INTRODUCTION OF DUAL TRAINING: ITS MEASURES AND EFFECTS

Since 2010 the aim of the Hungarian government has been to make VET even more responsive to the needs of the economy, and to further strengthen and increase dual VET. The government expressed its commitment to raise the share and prestige of VET by making manual skilled worker training programmes less theoretical, with more training conducted in enterprises (a similar course of action has been declared by the government in Poland, too). Little information is available on the impact of VET reforms in Hungary. The 2013 reform is an exception. As part of this, strong steps have been taken: the 4 to 5 year-long VET school programmes have been replaced by a uniform 3-year programme, the so-called 'dual VET model'. The proportion of practical training in these new programmes was significantly higher, while that of vocational theoretical education and particularly general education has been reduced. In parallel, from 2013 onwards, students started practical training based on a training contract two years earlier than before, at the age of 14 (year 9), just as before 1998, in their first VET year. The aim of the reform was to bring VET closer to the economy, to enable students to receive practical training as soon as possible and as much as possible in a direct corporate environment, and thus to be able to get a job more easily after leaving.[24]

Trade unions in the Hungarian education sector expressed serious concerns about these reforms. According to them, there was no doubt that this shift could serve the acute, short-term needs of the economy, but the longer-term, knowledge-based future of the economy and society was at risk (Kunert, 2016).

The majority of manual skilled worker training programmes for students in Hungary are enterprise-based, usually on a contract for which availability varies by sector or occupational field. Since the early 2000s Hungarian VET policy has introduced various incentives for

[21]During the interview, the director stated that he has contacts with such partners, but they are focused rather on finding good employers to accept young people for apprenticeships.

[22]There is cooperation with chambers on vocational exams, but the relationships are not very strong. To a greater extent, such cooperation is developed by vocational higher education institutions, but it mainly concerns cooperation with employers.

[23]Another study, examining the OECD LEED program in eleven countries, including Poland, concluded that 'in many countries, cooperation is only present at a formal level, which has not resulted in real political integration of cooperation strategies' (Froy & Giguère 2010, in Campbell, 2012: 55)

[24]According to a research report, the real reason for the significant increase in the number of practical training hours may have been the financial interest of the practical training provider companies (Mártonfi, 2019).

enterprises to participate in practical training provision. The 'VET contribution system' (levy system) was redesigned in 2012, as from then on companies can be reimbursed for the majority of their training costs from a sub-fund of the National Employment Fund.[25] However, different government policy measures did not influence significantly the willingness of companies to provide practical training for VET students.[26/27]

From the middle of the first decade of the 21st century, many organizational and curricular changes were taken in Poland to rebuild the VET system and raise its prestige (Nowak, 2017). Some of these changes resulted from the necessity of adapting to European VET strategies and best practices from EU countries, for example in terms of introducing dual education (Dębowski & Stęchły, 2015; Zając, 2018). Dual education has been part of independent Polish education policy from the very beginning and all reforms addressing this issue have been widely discussed for many years. As Kabaj (2010) points out, remuneration offered during internships or at the beginning of a vocational career in Poland is much lower than in Western European countries, and opportunities to find a job quickly are not as promising as in countries with a 'good dual VET system', for instance, Germany. Kabaj (2010) emphasizes that to increase the attractiveness of education in VET schools, it can be achieved by introducing dual VET system. It is broadly recognized in Poland that dual education enables young people to be better prepared for the labour market than the conventional school education system. Moreover, the dual VET system will enable young people from poorer families to start education in VET schools, as this system ensures income from work (Kabaj, 2010). In accordance with the assumptions of the latest education reform[28] 'industry' schools are to place a much greater emphasis on practical education (Nowak, 2017). Research (Dolinska et al., 2019; Schröder et al., 2020) shows that companies' willingness to get involved in VET (e.g. by sponsored classes or internships)[29] is growing. However, schools nowadays seem to play a more important role in training students than companies, and the fact that there have been significant developments in school workshops since the change of regime, and especially since EU accession, contributes to this. These developments have also supported the renewed attractiveness of VET for young people. Poland now has the fourth highest number of VET students in the EU.

While the excellent equipment of school laboratories allows some practical learning in the school itself, an important problem is the lack of teachers of vocational subjects with extensive

[25]According to the latest government decision, after decades, the 1.5% VET contribution has been abolished from 1 January 2022.

[26]In 2014, only 40 percent of VET school students entered into a contract. Both in May 2014 and 8–9 years earlier, more than half of the training contracts covered the same ten occupations.

[27]Between 2009 and 2014 the two largest increases in the number of apprenticeship contracts was observed near the Western border of the country. We can assume that employers tried to keep their potential workforce supported by apprenticeship contracts against the attractive and much higher Austrian salaries and social benefits.

[28]According to it, students of VET schools, most of whom are young employees, carry out practical training at a specific employer, learning the profession in real working conditions.

[29]An interview with the school head shows that the Polish education system is approaching dual education, but it is not a model in which a part of the hours (or 1–2 days) of study is provided by the employer each week. There are rather several-week internships during the school year, and for those students who are willing, also during the summer holidays. Therefore, in the current model of VET in Poland, all students must take part in practical training at an employer's enterprise (or with farmers for agriculture professions).

practical experience as a result of low salaries. This will become even more acute in the coming years (Dolinska et al., 2019; Schröder et al., 2020).

The proportion of theoretical and practical training in VET is constantly under discussion in Poland, too. In general, Polish secondary VET was considered very practical in socialism, due to strong relationships with large industrial enterprises, however since the 1990s it became more 'theoretical' due to limited cooperation with companies. Subsequent school curriculum reforms increased the role of general education courses, especially in technical schools. Kabaj (2010) was very critical of these changes, especially the implementation of the reform shortening VET in basic vocational schools in practice to two years through the implementation of general education subjects throughout the first year. Therefore, in the second decade of the 21st century, attempts were made to reverse these proportions. The results of research (Dolinska et al., 2019; Schröder et al., 2020) based on interviews with VET actors indicate that VET includes too much theory and the share of general education at vocational schools is too high. However, the importance of practical education has increased in recent years as part of successive reforms, which is reflected in the extension of school internships and many programs (usually co-financed from EU funds) aimed at equipping school workshops with modern machinery and devices for practical training. In many professions the standard length of internships with employers has been extended from 160 h (4 weeks) to 280 or 320 h (i.e. up to 8 weeks).

An interesting topic is the attitude towards the German dual model in the two countries. Policymakers for Hungarian VET looked at the model unilaterally. They did not take into account the characteristics and operating conditions of the economies, nor did they pay attention to the criticisms that had been made about German dual training. Looking at it this way, the image of the German dual system was not credible. Opinions hoping for prudent decision-making on the introduction of dual VET were rejected. Moreover, attention to the German model was not precise enough. According to research results, 'while German students start their vocational education after attending 7,155, in certain regions even 7,950 general education lessons, this number in Hungary is only 5,742 (Hajdu et al., 2015: 8). So, a Hungarian student participating in vocational education spends about two or three years less with general education subjects,[30] than his German counterparts' (Fazekas, Csillag, Hermann, & Scharle, 2020: 64–65).

Researchers have emphasized the danger of improving occupation-specific skills at the expense of general skills.[31] It is conceivable that young people will find themselves more quickly with more (actually expected) skills, but researchers stressed that their long-term labour market opportunities will certainly be worsened by a decline in their theoretical and general knowledge.[32] It is important to note that policy makers have ignored the above researchers' concerns.

Similarly, in Poland, researchers and policy makers drew attention to the poor preparation of students in general skills in elementary and the beginning of secondary VET schools with

[30]This situation was recognized by the MKIK, too, in an official publication.

[31]It was found that the general abilities (mathematics and comprehension) of young people deteriorated, and already after two years spent in VET the negative effect of a reduction of general knowledge subjects could be demonstrated.

[32]Makó et al. (2016) pointed out that a significant proportion of students enrolled in VET struggle with severe backwardness and learning problems brought about by elementary school, which VET schools are generally unable to help solve. According to another research, VET schools further worsen the initial lag of their students (Hajdu et al., 2015; Hermann et al., 2013).

insufficient theoretical preparation for vocational subjects. During educational reforms, examples from the German dual system were looked at as well, however, it was found that a simple transfer of German VET experiences to Polish conditions was not possible. Therefore, dual education in Poland is rather different from Germany, and more closely relates to previous Polish experience. Nevertheless, as in Hungary, the possibility of transferring German VET experiences is still under discussion.

The two countries appear to be in different positions over dual training. In Hungary, based on the experience gained, more critical opinions were expressed, especially regarding long-term effects. On the Polish side, the idea of developing a different, non-German type of dual training has emerged.

It is also very interesting how dual VET appears in statistics.[33] According to data,[34] under the latest VET law, all (100%)[35] Hungarian students who enrolled in upper secondary VET, enrolled in dual training (school based and work based vocational programmes) as well (for Poland this figure is about 13%). However, we have to take into account that this statistic for Hungary as a statutory possibility is rather about opportunities and wishes, and not about actual realized participation in dual training in the workplace.[36]

THE MAIN IDEAS AND TARGETS OF THE MOST RECENT CHANGES IN VET

There have been continuous changes in VET policy in Hungary in the last ten years. As measures following one another relatively quickly did not achieve the desired result, the government has introduced further new actions. Because of their rapid introduction some experts fear that government decisions have not been thoroughly prepared. It is not clear what role scientific and expert background has played in shaping the latest government decisions.

Based on the Szakképzés_4.0 (2019) [VET 4.0] strategy adopted by the Hungarian government in 2019, the institutional structure of VET has changed from the 2020/2021 school year. The institutional structure operating formerly, 'vocational gymnasium' and 'vocational secondary school', has been replaced in an ascending system by 'technicums' and 'vocational schools'. In technicums training lasts five years, and after the first two focusing on sector specific knowledge, dual training takes place in the second cycle. Vocational school training lasts for three years. In the first year, training provides sector specific knowledge, followed by dual training in the next two years.

The ideas of MGYOSZ (Confederation of Hungarian Industry) in 2018 and the idea of the new Ministry of Innovation and Technology now in charge outlined several developments[37] that

[33] https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_enrs04/default/table?lang=en.

[34] "Pupils enrolled in upper secondary education by programme orientation, sex, type of institution and intensity of participation" https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_enrs04/default/table?lang=en.

[35] Similarly to Germany

[36] For the Hungarian government the German dual VET is the example to copy. According to the newest law on VET (2019), both in lower-level vocational schools and in technicums basic education is followed by dual training. In theory, all VET students are candidates for dual training, but some of them – in certain aspects – cannot get it.

[37] Nonetheless, researchers evaluate the concept as a 'spectacular-looking voluntarist work designed only at the engineering level' (Györgyi, 2019), whose authors do not understand social movements and aspirations and who just try to solve problems and tasks using 'even more resources'.

were in an opposite direction to many changes from the period 2010–2018. However, the downsizing of the role of VET professionals and professional publicity, as well as limiting the room for manoeuvre of VET policy by major policies, will do little to make a substantial shift towards a more effective VET system in the near future (Györgyi, 2019).

New players in the system are the Sector Skills Councils (SACs) established in 2018 and the Vocational Innovation Council (SZIT) which assists the Minister of Innovation. Not enough data is yet available on their operation. Another new feature is that in 2019, the ministry deployed chancellors for VET centers who under the law have extremely strong authority, while the autonomy of the heads of the centers has been significantly reduced (Mártonfi, 2019).

Recently the aim of VET policy has been to carry out internships with as many students as possible, especially in the 'lower branch' of VET.[38] The range of organizations involved in dual training within the framework of apprenticeship contracts has expanded, however, the OKJ (National Qualification Register) has been abolished.

This system, especially in terms of the interests, funding, content, and thus the quality of the actors, is far removed from the German system, and even more so after 2010 (Mártonfi, 2019). There is a risk that nowadays dual training better serves the coordination of economic needs and training only in the case of large companies who mainly try to ensure their own labour supply and train pupils for themselves. In other internships, companies only undertake this service because of the profit. Researchers worry that companies are only interested in retaining students who make (higher) profits (Mártonfi, 2019). However, most of the students who come to the 'lower branch' of VET are unfit to start training due to the weakness of elementary school education. The consequences of these circumstances are not too promising.

In Poland, nearly 20 years after the previous reform, the education system was considered not sufficient to take into account contemporary 'civilization' challenges. Therefore in 2018, 8-year elementary schools were reintroduced, the *gimnazja* (lower secondary schools) were closed, and VET was extended again. At the same time, the basic vocational schools were transformed to first-stage sectoral[39] schools. This means a return to 3-year first-stage vocational schools, 5-year technical secondary schools, and the introduction of 2-year, second-stage, sectoral schools enabling the passing of the *matura* (school leaving) exam. In the meantime, the core curricula for both general and VET have been changed many times[40] (Nowak, 2017; Rachwał, Kilar, Kawecki, & Wróbel, 2018). This situation is subject to widespread criticism as reforms have been implemented without a thorough assessment of the effects of previous reforms. The current educational reform (from 2017) is not perceived as real improvement, but as re-labelling (Schröder et al., 2020). It also contributes to confusion of the young people themselves, the potential candidates, and may have a negative effect on the perception of these schools. As in Hungary, there are also plans to increase the number of contracts with employers and to urge employers to take responsibility for practical skills training.

[38]A VET structure that included both a long VET foundation and short specialized training was developed in the 1990s and this system was in force until 2013, with minor changes. Since then, the principle of connecting and coordinating VET outcomes and occupations and jobs, which was typical until the 1990s, has been brought to life again.

[39]"Branch" in direct translation from Polish

[40]These changes are so frequent that last year in one technical school students in different grades had classes based on three different core curricula for the (same) profession. (Information from the interviewed director).

However, the question is why, despite continued efforts, are companies not getting more involved in apprenticeships in Poland. The reasons for this may include the fact that the role of local authorities is strong in the governance system. As the preference for general training and the loss of prestige of VET led to the closure of many VET schools, those remaining have a strong interest in their survival and are trying to do everything within their decision-making powers to improve the quality of training. Since the modernisation of school workshops was not always covered by the state, school principals have tried in several cases to obtain sponsors.

We have not come across any research on this, but the question arises as to how companies' willingness to train is affected by widely held views according to which the Polish economy is not able to absorb so many young skilled workers (Wołodźko, Wasilewska, & Grochalska, 2021). It is well known that after leaving school, some students try to find work abroad. The fact that Polish wages are not able to compete with those in higher-income countries has been constantly contributing to emigration trends.[41]

We assume that the low financial interest of companies in investing in training, similarly their high interest in avoiding costs, is one of the reasons for the low participation of Polish companies in apprenticeships, and this interest in training differs widely between the two countries. In Hungary, until the end of 2021, for many decades, companies that did not undertake to train apprentices had to pay into the vocational training fund in order to ensure a more equal financial burden (apprenticeships could be replaced by in-house staff training). In Poland, schools organize apprenticeships and provide funding to undergo apprenticeships at companies. The source of this support is the school budget funded from the local authority budget, itself originating from the central budget as a part of the education subsidy. Companies can obtain financial support from this budget but its size is sufficient to meet only part of their needs.[42]

THE EFFECT OF THE COVID-19 EPIDEMIC ON SECONDARY VET

The seriousness of the COVID-19 crisis is indicated by the fact that in 2020, in every twentieth hour on a global scale, some large company declared insolvency. Governments have recognized the risk of corporate insolvency and introduced various measures in consequence: tax deferrals, tax cuts, etc. The condition of the leading tourism and hospitality industry in Hungary, as well as the automotive and automotive supplier sectors will only return to normal in 2022, according to the opinion of experts.

In Hungary, depending on the fluctuations of the epidemic, theoretical education in VET has several times been organized online. The Hungarian Chamber of Commerce and Industry (MKIK), in cooperation with regional chambers, has planned the creation of online knowledge repositories by sector and supports the performance of practical training places with advice. Four options for retaining this were outlined:

[41]Many of these young people – after realizing the difficulties abroad – come back to Poland.

[42]Polish researchers report that in some cases a company can elongate education in order to receive more money (Wołodźko et al., 2021).

1. The dual training center will continue to practice in the traditional way, provided that the conditions expected from an epidemiological point of view are met.
2. The dual training placement conducts the practical training in an online work schedule, if the practice cannot be organized in the traditional way due to the epidemic.
3. The school 'takes over' the student's practical education online.
4. The school and the practical trainer decide together to postpone the internship.

However, comprehensive research results on the overall impact of the epidemic on VET are not yet available.

Recently, the COVID-19 epidemic has been the most significant influence on VET in Poland, too. Although all Polish secondary schools were closed from March 12th 2020 (except for a short opening in September 2020) and were teaching several times online, practical and laboratory classes were still held in VET schools. Out of the spring period of 2020 (the beginning of the pandemic) employers allowed student admission to internships. (In September 2021 traditional teaching started in schools again.) However, it all depended on the specific industry, and whether it was completely locked down by the central government or not. For instance, internships in logistics services have collapsed, but those in industrial enterprises, car servicing or in food processing have not. In this worst initial period of the pandemic, practical classes were organized in schools in their workshops (laboratories). Instead of internships at employers, special educational projects based on simulations (including computer business simulations) were also carried out. This was possible thanks to the quality of equipment in schools, however, there are clear discrepancies between urban and rural regions in the provision of this equipment (Schröder et al., 2020). General education and theoretical VET courses have several times been conducted remotely as e-learning.[43] It seems that from this epidemic situation, VET will emerge better prepared for distance learning and this may be helpful after the pandemic period.

As in Hungary, in Poland the situation in VET in the times of the COVID pandemic depends a lot on the specific sector, to what extent it was vulnerable to the crisis and whether it was affected by decisions concerning lockdowns. However, it seems that in those sectors, professions with strong and well-equipped workshops in schools can face the crisis under less dramatic conditions compared to those who have only or mostly training placements in companies. It seems that school workshops in certain conditions can serve as a lifeline during short-term crises.

As the COVID pandemic has aggravated the labour situation in many companies, the need for apprentices and skilled workers is again being forcefully repeated by many employers. As a result, the demand for increased dualisation of VET and training is likely to be a recurrent theme in Polish education policy in the near future.

Not only for Hungary and Poland, but in general, the inevitable question is whether the necessary steps are or have been taken with regard to VET? More urgently than ever, the COVID crisis raises the question of the extent to which VET should be subordinated to sectoral interests. How to avoid the danger that in a crisis the cessation of a sector, a product or a service, even temporarily, will bring down the education of students with it. Is there a need for more

[43]In the headteacher's opinion, the effectiveness of these classes is good, but probably not as good as in personal contact with a teacher.

cross-sectoral training institutions? What about establishing 'lifeline institutions' that would operate only in crisis situations, thus providing training opportunities for students and opportunities for teachers and trainers who have lost their jobs? These flexible institutions may seem futuristic nowadays, but in the future these instruments may play an increasing role in dealing with unpredictable crises.

SUMMARISING AND ASSESSING THE CURRENT SITUATION IN RELATION TO CEDEFOP'S NEW VET SCENARIOS

Summarizing the discussion, VET has been undergoing deep changes in both countries over the last three decades. This has recently been further influenced by the COVID pandemic which has created new conditions and placed new demands on many areas of life, including VET. The complex impact of this challenge is difficult to assess for the time being, therefore our summary deals only tangentially with the effects of the pandemic on VET.

In Hungary in many respects, education and VET policy has consistently turned against international trends (Halász, 2012). After 2010, centralization[44] and national-level policies have had a suppressing effect on the formation of VET policy, with professionalism pushed increasingly into the background (Györgyi, 2019). While the purpose and definition of secondary VET is changing in Europe (Cedefop, 2020, see also Bonoli and Gonon in this Volume), economic goals are dominating VET to this day in Hungary. The implementation of tasks arising from ad hoc market requirements seems to appear as a given priority in developing Hungarian VET, while the employers are only able to define their medium- and long-term training needs within very narrow limits.[45] Laczik (2015) points out that predicting the demand for skills has become increasingly difficult. A recent study draws attention to the risk that 'leaders or representatives of firms and companies sometimes tend to overstate their short-term needs' (Munkácsy & Scharle, 2021: 42) and often believe that short-term labour shortages are the main obstacle to their future development while suggesting a reduction in the emphasis on basic skills in the curriculum (Munkácsy & Scharle, 2021). The training system, on the other hand, tries to maintain its often obsolete training structure, pursuing its interests. In our experience, this process is reinforced by the fact that neither citizens nor employers consider training as a long-term investment, both sides want a quick, short-term return (Benke, 2008).

The educational and social goals of VET in Hungary have almost completely disappeared for today. The study of disadvantaged pupils has shrunk to a marginal subject, preparing for civic life and being a responsible citizen are dwarfed relative to the function of serving the labour market. The suspicion has arisen that the recent peculiar Hungarian dual VET model serves only

[44]Schools' and trade unions' protests against the centralisation of power remained ineffective.

[45]The intent to match labour market demand and supply rests on uncertain, short-term articulated corporate needs in most cases. The main problem with its visualization is that it is basically about maintaining a static approach in a dynamically changing world. It is questionable how the applied practice of matching supply and demand, which did not work effectively even in the face of less fast-moving economic conditions, can function properly under turbulently changing environmental impacts. We consider this challenge as one of the most serious challenges for VET in the near future.

certain interests (Mártonfi, 2019). The newest strategy (based on the new VET Act 2019) aims to attract more students to VET schools, but makes it more difficult for them to switch to a general education path. While studying for a vocational qualification each student will be supported with a study grant, but the new law also introduces penalties for parents if their child leaves education without at least 'partial' qualification. As dropping out, which is already at a high level[46] (Fehérvári & Szemerszki, 2019), mostly concerns the lower branch of VET schools with a high concentration of disadvantaged learners, this measure may further worsen the situation for disadvantaged families (Györgyi, 2019).

For those students who perform poorly in elementary school, there is a direct path to VET. Because of their past failures, and because they have no choice but to try to survive, they are not in a position to recognize and represent their interests. These students seem to be at risk in many aspects.[47]

Researchers emphasize that a significant reduction of the compulsory school age, a reduction in key competence development, the shortening of training time, a reduction in the flexibility of learning paths, interoperability, compulsion to choose a career in early adolescence, reduction of career orientation and an unprecedented model for unprepared adolescent solutions, is unknown in international practice and in contradiction to professional recommendations (Györgyi, 2019; Mártonfi, 2019).

Instead of democratization and pluralization, flexibility and empowerment, in Hungary the government's response to declining interest in VET is to be rigid, concentrate power, and overregulate. One of the negative consequences of increasing centralization is that it curbs and makes impossible internal, bottom-up innovation efforts, and therefore forces and squeezes schools and training institutions into a completely subordinate, servile role. However, the curtailment and centralization of the decision-making powers of school directors did not produce the desired results. The most important consequence of the structural changes in both main 'branches' of VET in Hungary is that the previously flexible, relatively freely interoperable horizontal system has become rigid and impenetrable (Mártonfi, 2019). To the question that arose at the CEDEFOP conference on 'The future of VET' in November 2020 in Vienna on what remains for institutional diversity and innovation at regional, sectoral and local levels, the answer for Hungary in 2022 is almost nothing.

Outlining new VET scenarios (see Markowitsch and Bjornavold in this volume), including 'pluralist VET', some possible ways for more flexible and open forms of VET for the future are drafted (Cedefop, 2020). According to Marhuenda-Fluixá (see this volume), VET related transformations are subject to negotiation among actors within and across countries (administration, employers, unions, teachers) and are subject to the legitimation[48] of decisions. Marhuenda-Fluixá emphasizes that Cedefop scenarios are possible futures and as such they will only become enacted if there are actors able to fight for them. As he points out, 'it is

[46]Steps to reverse high early (unskilled) drop-out rates are still lacking.

[47]There is a danger that the tasks and responsibilities of those students remaining in the lower secondary VET sector will be over-regulated, and employers will take advantage of their weak position. However, several surveys suggest that they are apolitical, disillusioned, or, if politicized, easily influenced by various radical ideological currents.

[48]The 'sociology of conventions' provides us with a useful approach to analyse the processes of negotiation and legitimation behind historical developments in VET systems (Marhuenda-Fluixá in this volume).

also essential that actors are in a position to fight at all, therefore relying upon a democratic leeway'.

It has been discovered that both in Switzerland (see Bonoli in this volume) and the Netherlands (see Broek in this volume), one of the key elements in the development of VET is co-operation, and striving for agreement, and consensus, based on broad interests are considered important values. Democratic leeway for maneuver, which is an essential condition for meaningful negotiations between VET actors, is provided only in moderation in the two former socialist countries. In Poland, and especially in Hungary, highly centralized governance and the lack of broader, social functions for VET do not require or allow for meaningful negotiations between VET actors.

As regards Hungary, in the current circumstances and in the near future, only conditions for two scenarios seem to be in place: 'Distinct VET', because of the strong dual character of training, and 'VET for special purposes', because of the large group of young people with special needs. In our opinion there is little chance that decision-makers will move, even on an experimental basis, towards a 'Pluralist model', also because there is a lack of professional and social pressure to move in this direction.

As in Hungary, the VET system in Poland is highly centralized, but not as strongly because local and regional governments are still responsible for running VET schools. However, curricular matters are highly centralised, based on a single central core curriculum and central VET programs. On the other hand, VET schools are mostly run by local governments that have the greatest influence on their functioning in the organizational sense. Many of these, with the support of regional authorities or EU funds, have been successfully developing VET in recent years, which can be seen primarily in the co-financing of school workshop equipment. Therefore, it seems that the 'Pluralist VET' scenario which could be treated as a flexible new form of VET, may have a good chance of being implemented in the future. Currently, however, Poland is still at the stage of 'special purpose' or 'marginalized' VET which relies on work-oriented training, and in which certain forms of VET exist in an education system, dominated by general and higher education. Short training courses mainly in classrooms and workshops, with some on-the-job-training still dominates. This is the result of the strong promotion and development of general and higher education for over 20 years. Aspects of the 'Special purpose VET' scenario might still dominate Poland's VET system, influencing the way it is provided and understood, while aspects of the 'Pluralist VET' scenario might be more present in the future.

VET scenarios, theoretically, may seem to be most 'needed' in countries where the prestige of VET is low, and the proportion of young people choosing VET is also low or decreasing. However, the Polish and Hungarian examples suggest that due to methods of decision making, the centralised governance of VET, and the lack of meaningful professional discussion and dialogue, it is rather questionable, if the discussion of the scenarios within a broad VET expert community could be the result of an internal initiative in our countries. In our opinion, both for Hungary and Poland, national scenario workshops planned by Cedefop from 2022 have crucial importance to make it more likely that the potential of the scenarios as a catalyst for innovations and strategies in VET (see Markowitsch and Bjornavold in this volume) can be a real opportunity for our countries step by step. Otherwise, the question, who, which organisation is in the position to organize discussions on the scenarios would stay with us very long.

Scenario research raises a number of questions for the future: can 'Pluralist VET' open up new perspectives for secondary VET in connection with the development of local societies and economies[49]? Can a greater pro-activity level and capability give a positive shift for VET institutions to become innovation partners? We assume that only pro-active institutions are suitable for real partnership (Benke, 2019). Maybe 'Pluralist VET' is closer to that form which can show alternative training paths, rather than short-term, have an interest in long-term development, and is able to build a strong trust relationship with local societies and local economies. Exciting further questions are how to reconcile the interests of companies with the 'Pluralist model', and the possibility of supporting experiments for the new scenarios.[50]

CONCLUSIONS

Similar to other countries in an ageing Europe, the number of young people entering the labour market and its share of the working-age population is declining in Hungary and Poland. In addition, as a result of wage levels lagging far behind those in higher-income countries, especially after EU accession, their economies are adversely affected by emigration, which is a major challenge for both countries, especially for the Polish labour market, creating labour shortages in many occupations.

Polish and Hungarian VET are characterised by a continuous search for a new path. In this process, there have been similar and also less similar phases so far.

The governance of VET is highly centralised, while the economic and labour market relevance of VET is an absolute priority in both countries. The social aspects of VET have been neglected and little attention is being paid to recognising that transmission of knowledge about democracy alone is not enough for students to become democratically-minded citizens (Csapó, 2000). Partnership, including cooperation with social partners, and socialisation have been unresolved challenges in VET development work for decades, especially in Hungary. The prestige of VET has not improved despite measures taken by governments.

There has been a continuous criticism of VET in both countries for decades, the essence of which is that VET does not meet the needs of the economy. Therefore, the small scale of research in Hungary, and in Poland too, is focused on the labour market perspective, with very little attention paid to the study of the losers from technical progress, the long-term laggards. In general, after the regime change, research on VET in a broader context has declined. Interdisciplinary approaches in VET research (and development) are rare in both countries, as is VET research on the issues of 'citizenship' and 'empowerment'.

In both countries, policy highlights the indispensability of general knowledge in a turbulent, often unpredictable economic environment, but does not go beyond that. We have to emphasize that simplification, considering VET mostly from a short-term labour market perspective,

[49]Some researchers have examined in what ways VET could contribute to the development of a community-based culture in the future. The question has been raised as to how VET can meet the postmodern challenge of simultaneously meeting bottom-up, learning community pressure, and top-down policy instructions (Kimberley, 2003: 15–16).

[50]In Hungary, after the change of regime, in the early 1990s, the so-called 'World Bank' VET model was introduced. The question is whether it would be possible for the 'Pluralist model' to be tested experimentally with financial support?

forgetting its complexity as a system with several external factors, has weakened its prestige and compromised its quality, especially in the lower 'branch' of VET in both Hungary and Poland.

Hungary has more experience of dual VET, which explains why researchers have drawn attention to certain problems, like the decline in VET students' theoretical and general knowledge. Poland, on the other hand, is on the verge of its wide introduction and, in this state of anticipation, particularly about the specific Polish version of dual VET, opinions are more positive.

Extrapolating past developments into the future would suggest in both countries either the 'Distinctive' or 'Marginalised' scenario to materialise. Learning about the scenarios and broadly discussing them could make a positive contribution to future development processes in VET, both in Hungary and Poland.

However, it seems in 2022 that, partly because of the COVID pandemic, the increasing level of uncertainty about the prospects for economies and the permanent skills shortages in many occupations will continue to dominate short-term VET policies in both countries. It is questionable how these circumstances will influence and determine the willingness of policymakers to turn towards more flexible, less economy-driven, and more 'humanistic' forms of VET.

Further thinking about the results of a research project studying VET as a potential partner in local innovation (Benke, 2016), we assume that VET can become an innovation partner in shaping the local economy and society where and when it can break free from the constraints of ad-hoc labour market needs and top-down governance. If it can employ a bottom-up approach focusing on local community needs, presenting a training structure that is constantly renewable and capable of enforcing the diverse needs of both the local economy and local society (Benke, 2019). In the future, greater consideration of non-economic and non-market aspects may create new avenues and purposes for VET concerning social innovation. In this respect, the results of a survey in which nearly 90% of VET experts in Hungary stated that secondary VET institutions could play an important role in the life of local communities beyond teaching, was promising (Benke, 2016).

Contrary to Bourdieu's (1998) negative prediction, that more and more people will be facing the constant threat of insecurity and job loss, parents want a free, less vulnerable life for their children who choose a vocational path. This societal demand is reflected in the study (see Kust, 2020) which identifies the development of a positive social image of VET and raises awareness of the role, importance, and value of different professions as an urgent societal challenge.

However, the emerging problems and challenges are unlikely to be resolved within VET itself and, instead, will require a comprehensive approach, the revitalization of youth policy, and a stronger enforcement of social policy to ensure the interests of students. That way more attractive environments for possible VET candidates could be created in the future.

The ultimate driving force which perpetuates the problems and the failures outlined around VET is an overly utilitarian economic approach. It reinforces a zero-sum game that is insensitive to social inequalities and does not take into account the values associated with disadvantage (Benke, 2021). By contrast, there are efforts towards using a new perception, the 'capability approach' (Sen, 1999/2003) (Wheelahan, Moodie, Lavigne, Mou Samji, & Lindsay, 2019). 'By putting the needs of people first – rather than the needs of the economy – the capability approach emphasises social justice, human rights, and poverty alleviation in VET evaluation'

(Powell & McGrath, 2014:126). This topic is beyond the scope of our work, but we consider it an exciting area for further research in both Poland and Hungary.

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REFERENCES

Benczes, I. (2010). Market reform and fiscal laxity in communist and post communist Hungary: A path-dependent approach. *International Journal of Emerging Markets*, *6*(2), 118–131, 126; quotes Kozenkow 2011.

Benedek, A. (2003). *Változó szakképzés. A magyar szakképzés szerkezetének változásai a XX. század utolsó negyedében [Changing VET. Changes in the structure of Hungarian VET in the XX. in the last quarter of the century]*. Budapest: OKKER.

Benedek, A. (2018). Szakképzési szabályozási környezetünk változásai – 25 év lehetőségei és korlátai [Changes in our VET regulatory environment – opportunities and limitations of 25 years]. *Opus et Educatio*, *5*(3). http://opuseteducatio.hu/index.php/opusHU/article/view/277/478.

Benke, M. (Szerk.) (Ed.) (2001). *A szociális partnerek szerepe a szakképzésben. Nyolc europai uniós ország tapasztalata [The role of the social partners in VET. Experience of eight European Union countries]* (p. 271). Nemzeti Szakképzési Intézet. National Institute for Vocational Education (NIVE).

Benke, M. (Szerk.) (Ed.) (2002). *A képzés helye és szerepe a régiók fejlesztési terveiben [The place and role of training in the development plans of the regions]* (p. 261). Budapest: Nemzeti Szakképzési Intézet. National Institute for Vocational Education (NIVE).

Benke, M. (2008). Regionális szakképzési kutatások üzenete [The message of regional vocational education and training research]. *Szakképzési Szemle*, *4*, 293–327.

Benke, M. (2016). A tanuló közösségek és a szakképzés [Learning communities and vocational education and training]. *Educatio*, *25*(2), 184–197. ISSN 1216-3384. https://folyoiratok.oh.gov.hu/educatio/a-tanulo-kozossegek-es-a-szakkepzes.

Benke, M. (2019). Vocational education and training, the contested partner in innovation projects: Questions and remarks. In B. E. Stalder, & C. Nägele (Eds), *Trends in vocational education and training research: Proceedings of the European conference on educational research (ECER), vocational education and training network (VETNET)* (pp. 77–84). Bern: VETNET. http://doi.org/10.5281/zenodo.3457503.

Benke, M. (2021). Participatory planning as community building? In J. Boros, T. Kozma, & E. Márkus (Eds.), *Community building and social innovation* (pp. 69–87). Debrecen University Press, CHERD. https://www.academia.edu/52407909/Community_Building_and_Social_Innovation_2021_07_02_kiado.

Benke, M., Forray, R. K., & Kozma, T. (1990). *Adatok és elgondolások az oktatás feljesztési koncepciójához [Data and ideas for the development concept of education]* (p. 34). Budapest: Oktatáskutató Intézet, (Institute for Eductional Research) Kutatás Közben. ISSN 0865-4409.

Bönker, F. (2006). *The political economy of fiscal reform in central-Eastern Europe*. Cheltenham: Edward Elgar Publishing Ltd. Quoting Kozenkow 2011.

Bourdieu, P. (1998). A neoliberalizmus lényege [The essence of neoliberalism; Transl.: Illésy, M.]. *Esély*, *10*(6), 3–8. https://www.esely.org/kiadvanyok/1998_6/aneoliberalizmus.pdf.

Bükki, E. (2019). *Vocational education and training in Europe: Hungary*. Cedefop ReferNet VET in Europe reports 2018 http://libserver.cedefop.europa.eu/vetelib/2019/Vocational_Education_Training_Europe_Hungary_2018_Cedefop_ReferNet.pdf.

Campbell, M. (2012). *Skills for prosperity? A review of OECD and partner country skill strategies*. Institute of Education, University of London. LLAKES Research Paper 39. http://www.llakes.org/wp-content/uploads/2012/12/39.-Mike-Campbell.pdf.

Cedefop (2020). *Vocational education and training in Europe, 1995–2035: Scenarios for European vocational education and training in the 21st century*. Luxembourg: Publications Office of the European Union. Cedefop reference series; No 114. http://data.europa.eu/doi/10.2801/794471.

Chłoń-Domińczak, A., Dębowski, H., Holzer-Żelażewska, D. & Maliszewska, A. (2016). *VET and training in Europe–Poland*. Cedefop ReferNet VET in Europe reports. https://libserver.cedefop.europa.eu/vetelib/2016/2016_CR_PL.pdf.

Csapó, B. (2000). Az oktatás és a nevelés egysége a demokratikus gondolkodás fejlesztésében [The unity of education and training in the development of democratic thinking]. *New Pedagogical Review*, *50*(2), 24–34, (*Új Pedagógiai Szemle*, 50. 2. sz. 24–34).

Dębowski, H., & Stęchły, W. (2015). Implementing ECVET principles: Reforming Poland's vocational education and training through learning outcomes based curricula and assessment. *Warsaw Forum of Economic Sociology*, *6*(12), 57–88, nr 2.

Dolinska, J., Ketschau, T. J., & Schulte, S. (2019). Research design and preliminary results of an exploratory study on technical and vocational education and training in Poland. *TVET@Asia*, *13*, 1–14. http://www.tvet-online.asia/issue13/dolinska_ketschau_schulte.tvet13.pdf.

European Commission (2017). *Education and training monitor 2017. Country analysis*. Luxembourg: Publications Office. https://eslplus.eu/documents/esl_library/monitor2017-country-reports_en.pdf.

European Commission (2019). *Study on the representation of apprentices in vocational education and training (VET) and other relevant bodies or networks of EU Member States, Candidate and EFTA Countries*. ICF S.A. https://pmb.cereq.fr/doc_num.php?explnum_id=6699.

Eurostat Data Browser (2021). Pupils enrolled in upper secondary education by programme orientation, sex, type of institution and intensity of participation. https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_enrs04/default/table?lang=en.

Fazekas, K., Csillag, M., Hermann, Z., & Scharle, Á. (Eds.), (2020). *The Hungarian labour market 2019*. Budapest: Institute of Economics, Centre for Economic and Regional Studies. https://kti.krtk.hu/wp-content/uploads/2020/07/LMYB2019_onefile.pdf.

Fehérvári, A., & Szemerszki, M. (2019). Tanulási utak a közoktatásban és a felsőoktatásban [Learning pathways in public and higher education]. *Educatio*, *28*(4), 645–658. https://doi.org/10.1556/2063.28.2019.4.1.

Ferge, Zs. (1972). A társadalmi struktúra és az iskolarendszer közötti néhány összefüggés [Some connections between the social structure and the school system]. *Szociológia (Sociology)*, *1*, 10–35.

Garai, P. (2009). A szakképzés és a munkaerőpiac anomáliái, fejlesztési lehetőségei a Dél-dunántúli Régióban. Doktori disszertáció, Pécsi Tudományegyetem. [Anomalies and development opportunities of vocational education and training and the labor market in the South Transdanubia Region]. Doctoral dissertation. University of Pécs, Hungary.

Gazsó, F. (1982). Az ifjúság és a társadalom [Youth and Society] *Társadalomtudományi Közlemények*, 12. *(Social Science Publications)*, ISSN 0133-0381.

Gyekiczky, T. (Szerk.) (Ed.) (1985). *Vállalati törekvések a szakmunkásképzés korszerűsítésére [Corporate efforts to modernise apprenticeship training]*. Budapest: Oktatáskutató Intézet (Institute for Educational Research). ISBN: 9634040233.

Györgyi, Z. (2019). Változások a hazai szakképzésben [Changes in domestic vocational education and training] 2004–2019. *Educatio*, *28*(1), 105–120. https://doi.org/10.1556/2063.28.2019.1.8.

Hajdu, T., Hermann, Z., Horn, D., Kertesi, G., Kézdi, G., Köllő, J., & Varga, J. (2015). Az érettségi védelmében [In defense of graduation]. *Budapesti munkagazdaságtani füzetek [Budapest working papers on the labour market]* 1785-3788, BWP 2015/1. https://www.econ.core.hu/file/download/bwp/bwp1501.pdf.

Halász, G. (2005). Demokráciára és aktív állampolgárságra nevelés a 21. században. [Education for democracy and active citizenship in the 21st century]. *Új Pedagógiai Szemle*, (7–8), 65–70. https://folyoiratok.oh.gov.hu/uj-pedagogiai-szemle/demokraciara-es-aktiv-allampolgarsagra-neveles-a-21-szazadban.

Halász, G. (2012). Oktatáspolitika az Első Évtizedben [Education policy in the first decade]. https://ofi.oh.gov.hu/1-oktataspolitika-az-elso-evtizedben-halasz-gabor.

Hermann, Z., Horn, D., & Tordai, D. (2013). A 2013. Évi Szakképzési Reform Hatása a Tanulók Kompetenciáira [The impact of the 2013 VET reform on students' competences]. https://www.mtakti.hu/wp-content/uploads/2019/12/mt_2018_hun_63-68.pdf.

Horn, D. (2014). A szakiskolai tanoncképzés rövidtávú munkaerőpiaci hatásai. *Közgazdasági Szemle* [Short-term labour market effects of apprenticeship training]. *Economic Review*, *61*(9), 975-999.

Jakubowski, M. (2021). The institutional conditions of adapting to future challenges in the Polish education system. Working Paper. CEU Center for Policy Studies, Vienna.

Kabaj, M. (2010). *System kształcenia zawodowego i kierunki jego doskonalenia w warunkach integracji i wzrostu konkurencyjności [VET system and directions of its improvement in conditions of integration and increased competitiveness]*. Warszawa: Związek Rzemiosła Polskiego.

Kimberley, H. (2003). Urban disadvantage and learning communities: Integrating report. OVAL Research Working Paper (pp. 03–21). The Australian Centre for Organizational, Vocational and Adult Learning, The University of Technology, Sydney.

Kozenkow, J. (2011). Rendszerváltás, intézmények és gazdasági növekedés. PhD értekezés, Corvinus Egyetem. [Regime change, institutions and economic growth. PhD Dissertation] http://phd.lib.uni-corvinus.hu/594/1/Kozenkow_Judit.pdf.

Kozma, T. (2021). Nevelésszociológiából oktatáskutatás. (Áttekintés az MTA Pedagógiai Tudományos Bizottsága számára.) [From the educational sociology to the social research on education]. (Review for the Scientific Committee of Pedagogy of the Hungarian Academy of Sciences).

Kunert, A. (2016). Eurofound, Hungary: Vocational training system gets major overhaul. https://www.eurofound.europa.eu/observatories/eurwork/articles/law-and-regulation/fundamental-changes-in-vocational-training-system.

Kurek, S., & Rachwał, T. (2012). Vocational education and training in Poland during economic transition. In M. Pilz (Ed), *The Future of Vocational Education and Training in a Changing World* (pp. 321–340). Wiesbaden: VS Verlag für Sozialwissenschaften, Springer. http://doi.org/10.1007/978-3-531-18757-0_19.

Kust, I. (2020). Vocational education and training in the Light of the Reforms of Polish Education System in the Years 1999–2017. *Educational Studies Review*, *30*(1), 211–230. https://doi.org/10.12775/PBE.2020.012.

Kwiatkowski, S. M. (2013). Kształcenie zawodowe w szkołach ponadgimnazjalnych a oczekiwania pracodawców wobec absolwentów [Vocational education and training in upper secondary schools versus the expectations of employers towards graduates]. *Przyszłość. Świat-Europa-Polska*, *1*, 20–31.

Kwiatkowski, S. M. (2015). Niepokoje edukacji zawodowej [Concerns of vocational education and training]. *Horyzonty Wychowania*, *14*(31), 65-74.

Laczik, A. (2015). Hungary: Vocationald education and new development. In T. Corner (Ed.), *The education in the European union. Post-2003 Memeber States*. Bloomsbury Publishing.

Makó, Á., Hajdu, M., & Tóth, I.J. (2016). Szakiskolák, oktatás, szegénység. [Vocational schools, education, poverty]. Esély (Chance), *2016*(6), 39–69.

Marhuenda-Fluixá, F. (Ed.), (2017). *Vocational education beyond skill formation*. Peter Lang.

Mártonfi, Gy. (2016). A szakképzés intézményrendszerének átalakulásai [Transformations of the institutional system of VET]. *Educatio*, *2016*(1). https://folyoiratok.oh.gov.hu/educatio/a-szakkepzes-intezmenyrendszerenek-atalakulasai.

Mártonfi, Gy. (2019). Tanügyirányítás és struktúraváltás a hazai szakképzésben 2010 után [School management and structural change in Hungarian VET after 2010]. *Educatio*, *28*(2), 241–254.

Munkácsy, B., & Scharle, Á. (2021). The relevance of future challenges to education in five central Eastern European countries. In P. Radó, B. Munkácsy, Á. Scharle, & Á. Kende (Eds.), *Adapting to future challenges to education. Hungary, Poland, Romania, Serbia, and Slovakia* (pp. 15–60). Vienna: CEU Center for Policy Studies. https://cps.ceu.edu/sites/cps.ceu.edu/files/attachment/publication/3321/cps-book-adapting-future-challenges-education-2021.pdf.

Nowak, J. (2017). Kształcenie zawodowe w Polsce w świetle obowiązujących aktów prawnych [VET in Poland under the Current Regulations], *Zeszyty Naukowe. Organizacja i Zarządzanie/Politechnika Śląska*, *111*, 273-282.

Pasierbek, E. (2011). Edukacja zawodowa – gorsza forma kształcenia? [Vocational schools – A worse form of education?] *Polityka Społeczna*, *11/12*, 22–25.

Pilz, M. (2016). Typologies in comparative vocational education and training : Existing models and a new approach. *Vocations and Learning*, *9*(3), 295–314. https://doi.org/10.1007/s12186-016-9154-7.

Porčnik, T. (2019). Still moving toward markets 30 years after the Berlin wall. https://www.fraserinstitute.org/blogs/still-moving-toward-markets-30-years-after-the-berlin-wall.

Powell, L., & McGrath, S. (2014). Exploring the value of the capability approach for VET and training evaluation: Reflections from South Africa. In G. Carbonnier, M. Carton, & K. King (Eds.), *Education, learning, training: Critical issues for development*, International Development Policy series No. 5 (Vol. in press, pp. 126–148). Boston: Brill-Nijhoff.

Rachwał, T. (2015). Structural changes in Polish industry after 1989. *Geographia Polonica*, *88*(4), 575-605. http://doi.org/10.7163/GPol.0035.

Rachwał, T., Kilar, W., Kawecki, Z., & Wróbel, P. (2018). Edukacja w zakresie przedsiębiorczości w wychowaniu przedszkolnym, szkole podstawowej i szkołach średnich w świetle nowej podstawy programowej [Entrepreneurship Education in Pre-School, Primary and Secondary Education in the New Core Curriculum]. *Przedsiębiorczość – Edukacja/Entrepreneurship – Education*, *14*, 389-424. https://doi.org/10.24917/20833296.14.28.

Radó, P. (2021). Governing education for adaptive change in five central Eastern European countries. In P. Radó, B. Munkácsy, Á. Scharle, & Á. Kende (Eds.), *Adapting to future Challenges to education. Hungary, Poland, Romania, Serbia, and Slovakia* (pp. 99-142). Vienna: CEU Center for Policy Studies.

Reegård, K., & Dębowski, H. (2020). Exit, voice or loyalty? VET stakeholders' response to large scale skilled emigration from Poland. *International Journal for Research in Vocational Education and Training*, *7*(3), 325-343. http://doi.org/10.13152/IJRVET.7.3.4.

Schröder, T., Schulte, S., Dolinska, J., Ketschau, T. & Menzel, M. (2020). Preliminary Study of TVET in Poland (SBBP) 'An analysis of challenges and needs in TVET regarding the perspective of educational institutions in Poland'. Final (online) conference – presentation of results and discussion. https://edunet-poland.pl/wp-content/uploads/2020/05/TU_Dortmund_28.05.pdf.

Sen, A. (1999). *Development as freedom*. Oxford: Oxford University Press. (In Hungarian: published in 2003. A fejlődés mint szabadság. Budapest: Európa Könyvkiadó).

Stańczyk, A. (2013). Górnicze szkolnictwo zawodowe w okresie transformacji ustrojowej [Mining VET in the Restructurisation Process]. *Studia Ekonomiczne/Uniwersytet Ekonomiczny w Katowicach*, *131*, 161–168.

Szakképzés_4.0 (2019). [VET 4.0] Innovatív Képzéstámogató Központ (Innovative Training Support Center) A jelenleg működő szakképzési és felnőttképzési rendszer bemutatása, a rendszer legnagyobb kihívásai és kulcsproblémái [Presentation of the current vocational and adult education system, the biggest challenges and key problems of the system]. https://ikk.hu/files/Szakkepzes_4.0_II.pdf.

Urbanek, M. (2013). Kształcenie zawodowe dla potrzeb praktyki – założenia a rzeczywistość [Vocational training for practice – assumptions versus reality]. *Zarządzanie i Finanse, R.*, *11*(1), 437-451 part 2.

Varga, J. (Ed.), (2018). *A közoktatás indikátorrendszere 2017 [Indicators of public education 2017]* MTA Közgazdaság- és Regionális Tudományi Kutatóközpont. Budapest: Hungarian Academy of Sciences, Centre for Economic and Regional Research. https://kti.krtk.hu/wp-content/uploads/2018/02/A_kozoktatas_indikatorrendszere_2017.pdf.

Velkey, G. (2011). A középfokú képzés területi rendszerének változása [Changes and development of regional secondary VET in Hungary]. *Tér és Társadalom (Space and Society)*. https://tet.rkk.hu/index.php/TeT/article/view/1930/3791.

Velkey, G. (2013). *Dinamikus egyensúlytalanság : A hazai közoktatási rendszer szétesése, felforgatása és a konszolidáció esélye. [Dynamic imbalance: The disintegration, subversion of the Hungarian public education system and the chances of consolidation]*. Pécs; Békéscsaba: MTA KRTK Regionális Kutatások Intézete. 978-963-9899-74-2.

Wheelahan, L., Moodie, G., Lavigne, E., Mou, Samji, F., & Lindsay, C. (2019). Theorising the role of public vocational education institutions using the capabilities approach. In B. E. Stalder, & C. Nägele (Eds), *Trends in vocational education and training research, Vol. II. Proceedings of the European conference on educational research (ECER)* (pp. 445–453). Vocational Education and Training Network (VETNET). https://doi.org/10.5281/zenodo.3358917.

Wołodźko, E., Wasilewska, E., & Grochalska, M. (2021). The advantages and disadvantages of Polish dual vocational education from the perspective of students, school representatives and employers. *Journal of Vocational Education and Training*, *73*(2).

Zając, B. (2018). Rozwój edukacji zawodowej opartej na współpracy z pracodawcami [The Development of VET Based on Cooperation with Employers]. *Przedsiębiorczość i Zarządzanie*, *19*(8), 75-87, part 3.