

Research Paper

The Development of the Number of Pupils in Secondary Institutions in Light of Political and School Structure Changes

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Abstract

There are a number of factors around the world that influence the evolution of school structure such as historical, cultural tradition, nature of the economy, demographics, etc. After-primary school further education is a highlight of the Hungarian school system, as it also defines the entire school career and future of the pupils. The choice between the three types of training, the secondary school, vocational academic school and standard vocational school, is backed by different strategies spanning the entire school career of the students, the educational qualifications being the goal. While choosing high school leads to a degree, the choice of vocational school is one of the fastest and easiest ways of the acquisition of qualifications. However, vocational secondary school also offers a chance to study in higher education (Hermann, 2005) In our study, we look at the evolution of secondary school types in light of policy changes from the 1940s to the present day.

Keywords: secondary education, headcount formation, high school, vocational academic school, vocational school

Introduction

Social and economic development can be traced back to the industrial and schooling revolution, including the expansion of compulsory education and, consequently, the development of man's knowledge (Polónyi, 2019). It is a fundamental fact that education contributes to the development of the economy (Varga, 1998), there is a wide range of expertise in the detection of a positive relationship between these two components (Polónyi, 2019). The extension of the concept of traditional capital to human capital began in the 1950s, when researchers working on farm growth "only consider the factors of production that are an explanatory variable when assessing growth economics has traditionally been taken into account, (...) then a significant proportion of growth remained unexplained. The source of the "residue" was first indicated in technical progress [Solow (1967)], and later in the change in the composition and quality of the work (...) The improvement in the quality of work was therefore partly reflected in the increase in education and, when assessing economic growth, variables were included in the analysis that take into account the increase in education" (Varga, 1998: 70). This therefore means that the participants in economic growth, the workers, have a significant role to play in their education and qualification.

Human knowledge is created as a result of a long and costly process, but investing in human capital increases not only the productivity and income of the individual, but also the performance of the economy as a whole (Polónyi, 2019). In addition, it has been scientifically proven that the quality of education contributes to the opportunities for socio-economic development. For a long time, the economy and its competitiveness have been determined by the amount of material resources, but in recent decades the price of education has become increasingly involved in the price of the products produced (Csapó, 2009). Worldwide, as in Hungary, the education of the workforce (Polónyi, 2019) is growing, and in our paper we examine the evolution of the number

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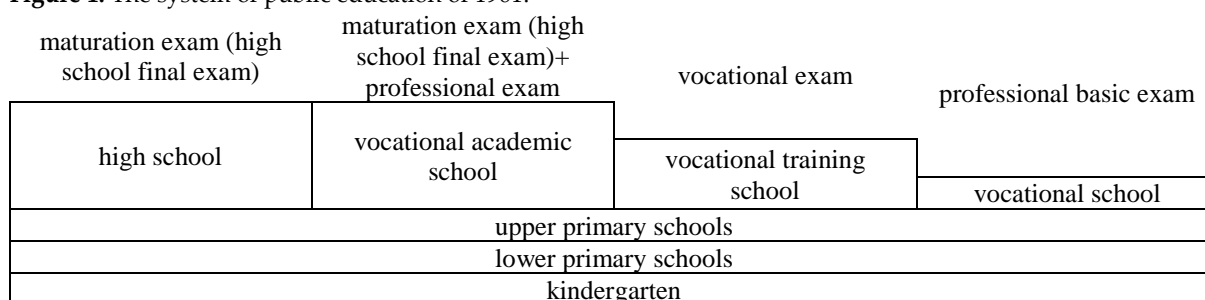
of secondary education participants in the 20th century from the beginning of the 20th century to the present day, in light of political change and institutional transformations.

The secondary institutional system

At the beginning of the 20th century, pupils in high schools were mainly children of landowners, mine- and factory owners, traders, civil servants and liberal intellectuals. In the period before the First and Second World Wars, we saw a similar picture, the children of the lower ethnic groups in high schools being underrepresented. "After 1945, as secondary school became free, the financial reason fell out of the list of reasons, but the situation observed in the first half of the century remained substantially unchanged" (Andor & Liskó, 1999: 56). The eight-grade primary schools were set up in 1945 with the aim of providing primary literacy and preparing students for secondary education. At the same time, grammar schools and vocational schools were converted into four-grade schools (Pukánszky & Németh, 1996). After the war, the number of high schools and secondary schools in the early 1950s continued to rise. The policy led to more and more people taking part in education, as the forced enrollment of young people from working-class and poor families took place.

"In 1949, all secondary schools were reorganized into high schools. General high schools with human and real (science) branches were created" (Pukánszky & Németh, 1996: n.p.). In addition to high schools, vocational academic schools were developed: pedagogical (they were eliminated by kindergarten and teacher training), economics, industrial and agricultural, which later became three or four-year old technical schools, were reformed in the 1960s (Pukánszky & Németh, 1996). The 1961 school system is shown in Figure 1.

Figure 1. The system of public education of 1961.



Source: Pukánszky and Németh, 1996

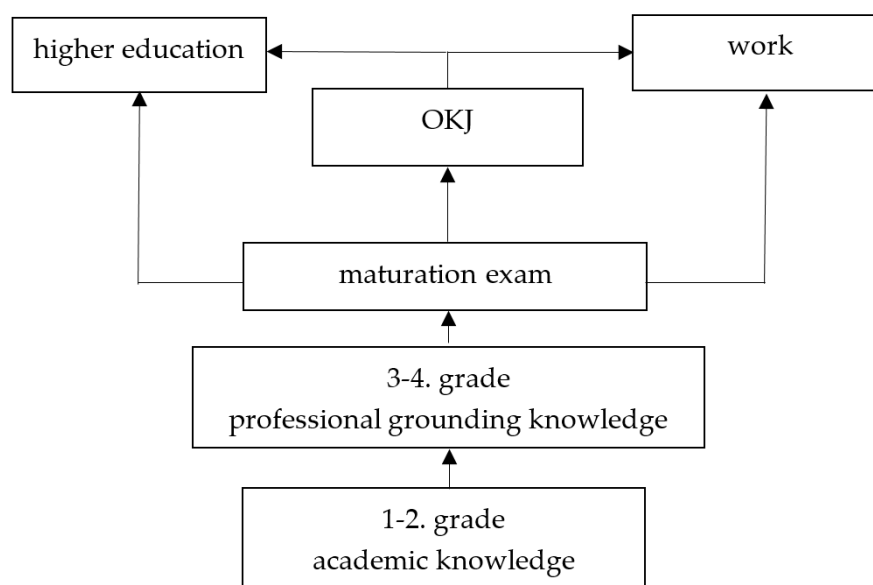
In Hungary, the school system has been decomposing since the mid-1960s. In the 1980s, those preparing for reform turned not only towards education, but also towards (political) reform as a whole. Accordingly, kinds of 'grassroots reforms' (school trials) launched within the school system and discussions began not only on the transformation of primary school, but also on the transformation of vocational training (which was considered to be the "resupply of the working class" by the respective party leadership)" (Kozma, 2001: 69).

The expansion of secondary schools brought with it that the children of manual labor workers continued to study in high schools and secondary schools after primary school. However, as a result, the importance of high school graduation has been reassessed. While education has been a condition for certain jobs so far, it now provides more chance of getting into higher education. "The finding that the high school is a type of school for further education, but the vocational academic school is primarily a type of preparation for entry into work, is not empty speech" (Andor & Liskó, 1999: 57). During the period of socialism, vocational training took place in vocational worker training schools, which created mobility opportunities for poorer classes. These institutions had low levels of public knowledge training and gave instead professional knowledge. Education was typically of a low standard, from there it was impossible to study on, and, with the collapse of socialism, it turned out that the workforce skilled here was not competitive. In 1989, 59% of VET pupils were given vocational training, 37% of vocational academic schools, and by the mid-1990s the proportions reversed (Andor & Liskó, 1999). After the change of regime, therefore, mainly due to unemployment in the skilled labour sector, the application to secondary schools increased, with a decrease in signups for vocational schools. Following the transformation of employment benefits and salaries and in an effort to obtain marketable knowledge, entries in the labour market were more turned to vocational academic schools (Andor & Liskó, 1999; Halász, Surányi & Nagy, 1995; Kertesi & Varga, 2005).

In the 1990s, one of the opportunities for renewing the vocational training system was the launch of the World Bank Programme (Figure 2). In the new model, training time has been extended and the proportions of general

and vocational training have been restructured. On this basis, courses in the form of 2+2 were established, in which the first two academic years mainly involved public knowledge education. In the second two years, knowledge was set at the level of a group of professions. After year 4, at the end of the training, on the one hand, the GCE exam allowed further education (Tót, 1996) and, on the other hand, the training under the OKJ (*National Training List*) continued (Farkas, 1998).

Figure 2. World Bank High School Model.



Source: Farkas, 1998; self-edited

While in the past the choice of profession was at the age of 14, after primary school, the time for the choice of profession has been shifted due to the public knowledge training of the World Bank model. This shifted not only to the time of the career choice, but also to the time of the job."Instead of training traditional, rather fragmented professions, foundation training of 13 different groups of professions has been launched, which has been established in accordance with annexes V to VI. in 2010, special vocational training is complemented by the training of OKJ professions and technician training. This has not only led to the elimination of previous fragmented vocational training, but also to the modernisation of the profession structure, i.e. schools teaching 'traditional' professions have gradually switched to 'more modern', more in-labour-market and therefore more popular professions for applicants' (Liskó, 2001: 5). The following groups of professions were taught in the programme: engineering, electrotech-electronics, health-social care, food industry, architecture, information technology, commercial marketing, environmental water management, economics, transport, chemical industry, agriculture, tourism. When evaluating the World Bank model, it was highlighted that the social composition of these classes has improved, the rate of drop-out decreased, training standards and its asset pool bettered (Liskó, 2001).

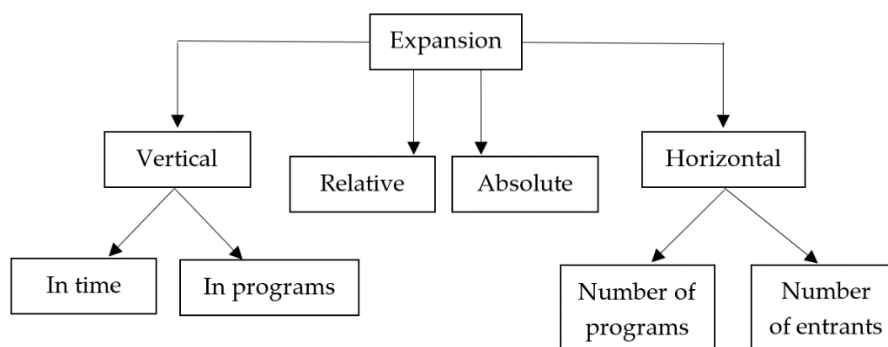
In 1999, three-year old vocational schools were abolished and new vocational schools were established, where in the 9-10th grade, the primary education was extended, followed by vocational training with varying durations of training (Mártonfi, 2016; Györgyi, 2019; Sós, 2010). The vocational training concept, published in 2011, states the restoration of the three-year vocational training structure prior to 1998. The state is increasingly involved in vocational training and supporting the introduction of dual training with examples from abroad. Vocational academic schools have shifted towards vocational training. The date of the career choice has been returned to the age of 14, which can fall in only two directions with the creation of impassable training types: grammar school or vocational training (Györgyi, 2019).

As we can see, from the mid-20th century onwards, the secondary education school system hasn't transformed, despite the fact that it has undergone a number of reforms and maintenance changes: grammar schools, vocational secondary schools (not vocational academic schools, but 2020 technical schools) and vocational training (now known as vocational secondary school).

Evolution of headcount data in secondary education

Analysis of the number of secondary education types is intertwined with the expansion of secondary education. Before we start with the analysis, the concept of expansion must be clarified. Expansion is a change in education systems which, according to Archer (1982), can be divided into three stages. The Numbers Stage is where the number of schools and pupils will surge. The Growth Stage is the scope to which education systems and the resources available {such as money, expertise, power, etc.} will increase. The Inflation Stage describes when an education level becomes commonplace, and education moves up one level, making the previous level inflate. Several forms of educational expansion are shown below (Figure 3.).

Figure 3. Forms of expansion



Source: Halász & Annás, 2011; self-edited

Timely vertical expansion means that the duration of existing training programmes is increasing, which may not be associated with an increase in the number of enrollments, whereas in the case of vertical expansion of the programmes, new ones are built for existing training. In horizontal expansion programmes, choices are expanded by new programmes in parallel with what has been done so far. The proportion of participants in the programme increases when the number of entrants is shown. Relative expansion means that the proportion of entrants (enrolled) in a given age group increases, the number of pupils entering a given programme for absolute expansion increases (Halász, 2002; Halász & Annás, 2011).

Education in Europe has been the focus since the 1960s, and education has been seen as the engine of economic development and the instrument of social policy. That's when school structural reforms and competent schools began (Lannert, n.é.). In Hungary, before the 1940s, only 3-5% of those born got a high school education, this number reached 10% by 1945. At that time, the primary objective of secondary school was to select and prepare the elite for higher education. In secondary education, this is called the elite section based on Trow. The majority of public education in Hungary was in 1961, when the enrollee commitment was increased to 16 years. This meant, after graduating from primary school more and more people remained in public education. Secondary education enmasse started in the second half of the 1970s (Kozma, 2001).

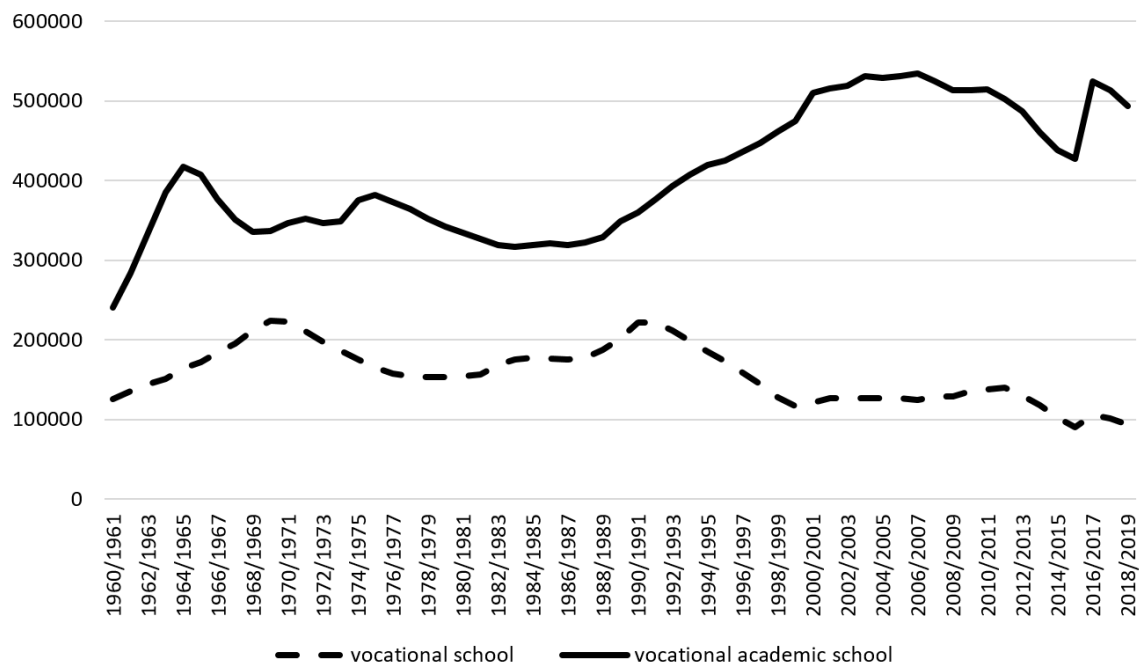
The Council Regulation of 29 June 1961 Law III on the education system of the People's Republic of Hungary is the beginning of school reform in Hungary, when education was seen as an investment in the future (Kelemen, 2003). The law raised the age limit for compulsory education to 16, thus expressing the intent to make secondary education compulsory for 14–18-year olds. It was then that the vocational academic school was born as a new type of school, designed to ensure that young people had both a professional examination and a baccalaureate, allowing them to both work and also to start higher education. The reform was criticised after the year of its introduction, and was eventually halted by the MSZMP's PB (Central Committee of the Hungarian Socialist Workers' Party) party decision in 1965 (Darvai, 2015).

In 1972, on the basis of a decision adopted by the Central Committee, the structure of the education system was left intact while the content, methods and the inner life of the school were changed. The aim was to reduce the school curriculum, improve philosophical education and support the children of manual labor workers. In addition, tasks had been meted out in relation to specific types of schools, teacher training and educational research, and issues of governance and funding. No decision had been made to solve school structural problems. "As the biggest failure of the 1972 education policy process, we can see that this consensus for the integration of

government activity has not been established" (Halász, 1988: n.o.). Despite the protests of the specialised committees, in the late 1970s, the vast majority of secondary vocational training was linked to the entrepreneur sphere by switching it to vocational training (Halász, 1988).

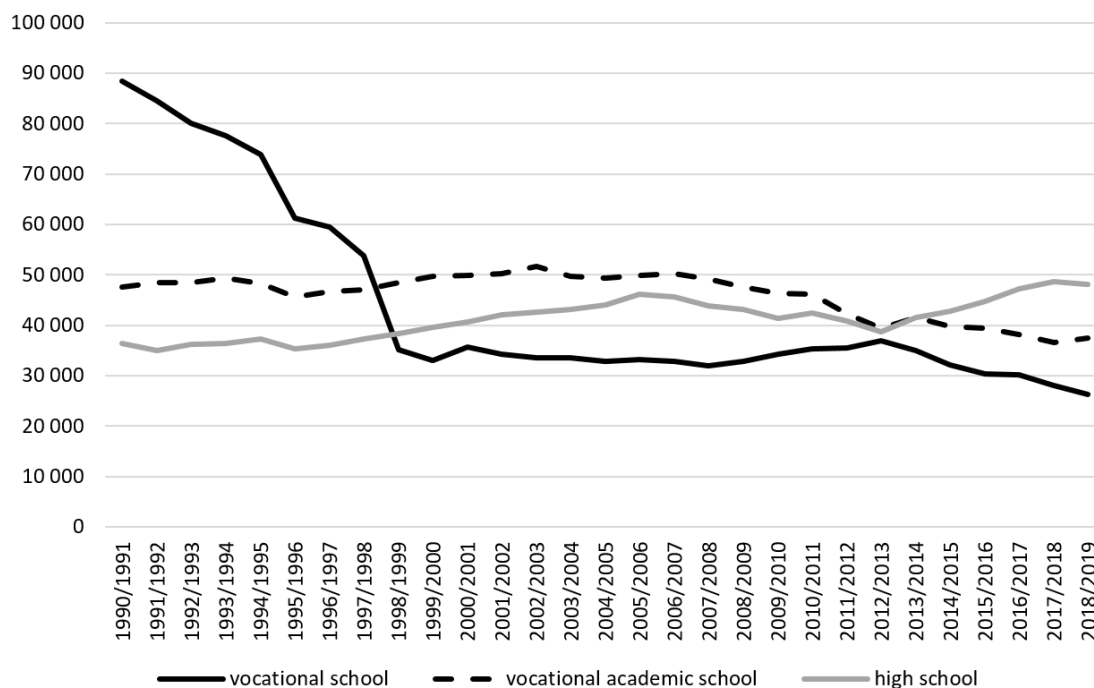
On the timeline (Figure 4), the changes in education policy described so far can be clearly followed in the number of pupils attending vocational training and secondary schools that give them a baccalaureate. Following the reform of 1961, which aimed to generalise secondary education and to this end create a new type of school and raise the age of compulsory education, the number of secondary education participants has steadily grown. While there is a sharp increase in graduate schools, there has been a slow but sustained increase in vocational schools up to the 1970/1971 academic year. The education development concept, developed in 1982, announced a reform policy at both the level of governance and the school structural level, which would have meant integrating secondary education, one of the elements of which, for example, was a reform policy. The three-year vocational school would be terminated. However, this was not implemented. Even whilst preparing the 1985 Education Act, the Ministry of Education wanted to be a leader in the field of secondary vocational training itself, in which it would have relied primarily on companies and economic portfolios, but also upon the government within the structure (Halász, 1988).

According to data from Kozma (1983), the move to enmasse secondary education began in the 1970s. His data shows a move of 72 % in 1970, 79 % in 1975, and 86 % in 1979. In the study of Györgyi and Imre (1998), they write that the number of middle-class students in full-time training began to grow rapidly in the second half of the 1980s, marking the start of secondary education expansion. The growth trend of the 1980s in secondary education can also be observed in Figure 1. While in 1985 the proportion of those attending secondary school after primary school was 46.8 %, this proportion increased to 61.6% in the 1996/1997 academic year. In the 11 years since, the number of students in the middle instance has increased by 23% (Györgyi & Imre, 1998) and, as shown in the figure, has been in the mid-2000s, despite the decline in the number of students since 1992 due to demographic reasons. The figure can also be read from the study of Györgyi and Imre confirming the increase in the number of pupils in secondary schools giving them maturity, while in vocational training there is on a downward trend. Kozma wrote in his 1983 book that secondary education should become a focuspoint of development by the end of the decade, because "In addition to the increase in the number of students, we can realistically expect that the baccalaureate, the preparation for tertiary education, the public's interest in secondary school will be even greater than today. After all, by this time, the vast majority of parents will be primary school graduates, and more than half of them will have secondary education. Which increases tensions because we can only currently offer a suitable range of schools locally in around a third of the country - in fact only in cities and in their immediate neighbourhoods; others must commute or live in dorms. Increased interest in secondary education by the end of the decade would require school policy to make the range of secondary education available to everyone in more places in the country, in organisationally diverse forms. This would not only be a cultural policy requirement, but would also increase the ability of large villages and small towns to retain the population" (Kozma, 1983: 124).

Figure 4. Number of apprentices and graduate students between 1960/1961 and 2018/2019

Source: KSH STADAT, self-edited

Now let's look at the change in numbers among those leaving primary school entering the 9th year from 1990 onwards (Figure 5). Halász's analysis (2002) shows that the proportion of vocational secondary school programmes increased clearly until the 1988/1989 academic year, and after a brief downturn another increase began in the early 1990s. The 9th graders in vocational schools were higher than those entering high school, and though by the second half of the 1990s this trend began to decrease, the number of students in vocational secondary schools was still greater than in high school. If you look at Figure 6., we can see that the number of people in there has increased by a higher proportion compared to the number of entrants." One of the most commonly used indicators of relative expansion is the proportion of students who have moved on after the end of primary school." (Halász, 2002: 98).

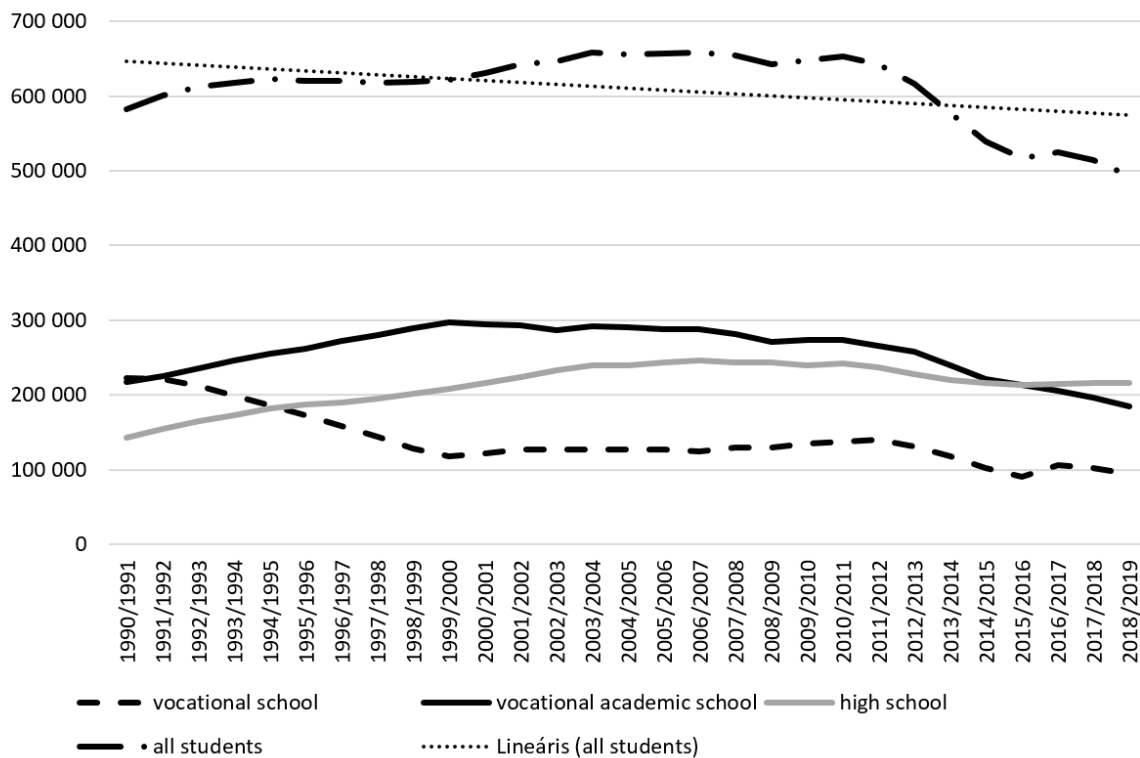
Figure 5. Grade 9 enrollment between 1990/1991 and 2018/2019

Source: KSH STADAT, self-edited

Figure 5. shows a spectacular narrowing of vocational trainees compared to the other two baccalaureate courses, despite the fact that in the early 2000s they were still largely pure-profile schools (Mártonfi, 2016). The relative expansion also affected those in attendance, as the training programme expanded vertically, so that students continued to stay in public education. By the end of the 1990s, students aged 15–19 will reach the OECD average of countries (Halász, 2002). At the end of the 1990s, secondary school places were sufficient, and in 2001 around 15% of secondary school places remained vacant, exceeding 20% for vocational secondary schools (Hermann, 2005; Hermann & Varga, 2020).

From the mid-2000s, there have therefore been new trends in secondary schools with three training profiles: a slow decrease in the number of secondary schools with two high schools, with an increase in the number of vocational schools. This may have been due to the fact that 'after the 2006 election, vocational training was transferred to the Ministry of Labour and the new sectoral leadership developed a new, more assertive vision. This, as many of its maintainers infringed upon local political and institutional interests, was not put to debate, but published in the 2007 Public Education Act. It was only made public by the 25 June 2004 amendment. This included conditions to enforce institutional integration much tougher than before. At least 1500 pupils had to be taught in the newly inaugurated Regional Integrated Vocational Centres, and the institutions had to train their profiles only in accordance with the so-called Regional Development and Training Committees' direction-ratio" decisions, which limited the number of children who could be admitted to many professions. If they did not, they could not benefit from the tens of billions of HUF per year in national development resources. They all saw that without these resources it was not possible to operate vocational training long term, so the coercive power of this regulation was high" (Martonfi, 2016: 53).

In 2012/2013, another political decision led to the vast majority of secondary schools, including vocational education schools introduced into the Klebelsberg Centre for The Maintenance of The Institution (KLIK). From then on, the number of vocational schools has been steadily declining, governing by the 2015 Ministry of National Economy (NGM) and, consequently, the establishment of vocational training centres has only slowed down this process for a short period of time (see Figure 5. and 6. As we can see in the figure, among the three training programmes, the high school has been deemed the winner, while the number of students in vocational schools is gradually declining.

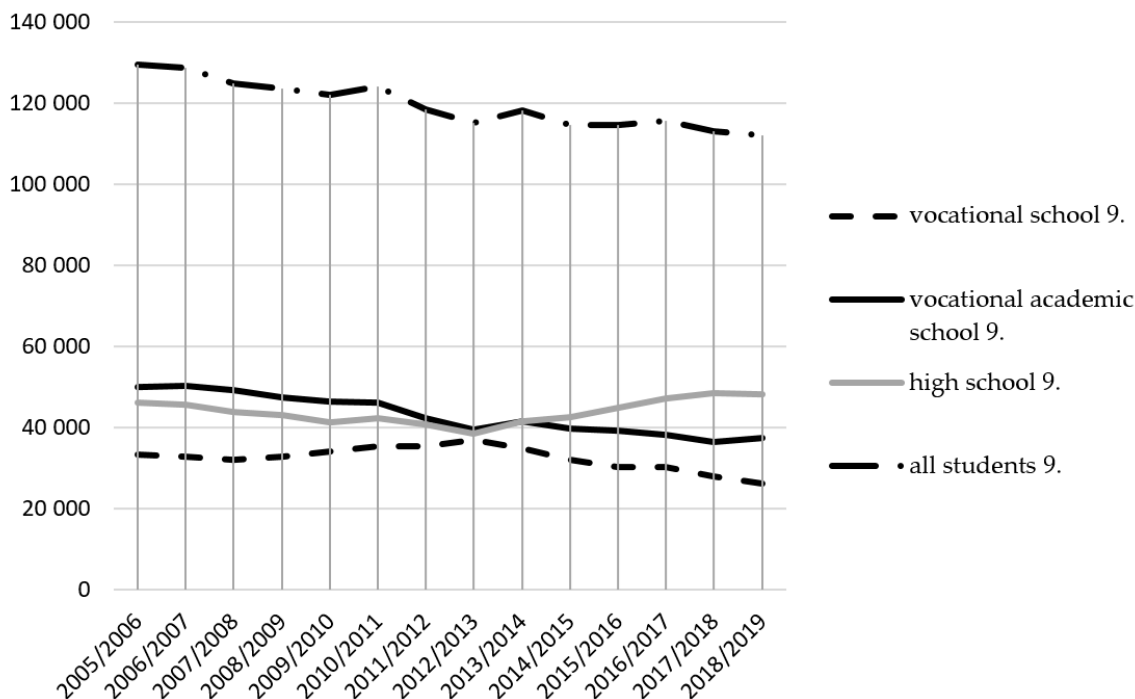
Figure 6. Change in the number of students per type of secondary education between 1990/1991 and 2018/2019

Source: KSH STADAT, self-edited

In 1998, the number of live births fell to less than 100,000, and by 2009 it fluctuated to between 90,000 and 100,000. After that, it continued to decline slightly, but remained at around 90,000. The 15-year old, secondary education population of interest in our analysis declined to 84% and decreased by 11% between 2010-2014. Polónyi's prediction proved to be correct, namely that the numbers will continue to decline until 2018, as does the trendline of Figure 6.

If we take out the headcount data from 2006 onwards, from the transformation of vocational training appearing alongside the elections, it is more acute that skilled workers' training reached its highest level in the 2012/2013 academic year, and has since shown a steady decline (Figure 7.). This was despite the fact that in 2011 the Department of Vocational Training and Adult Education, of the Ministry of Employment, worked out a concept for the transformation of the vocational training system. This transformation coordinating with economic needs expected to increase the number of vocational trainees. They enacted such measures as the introduction of vocational school study grants, three-year vocational school training, extension of the apprenticeship system, and more (Polónyi, 2016).

Figure 7. Changes in the number of students enrolled in Year 9 between the academic years 2005/2006 and 2018/2019

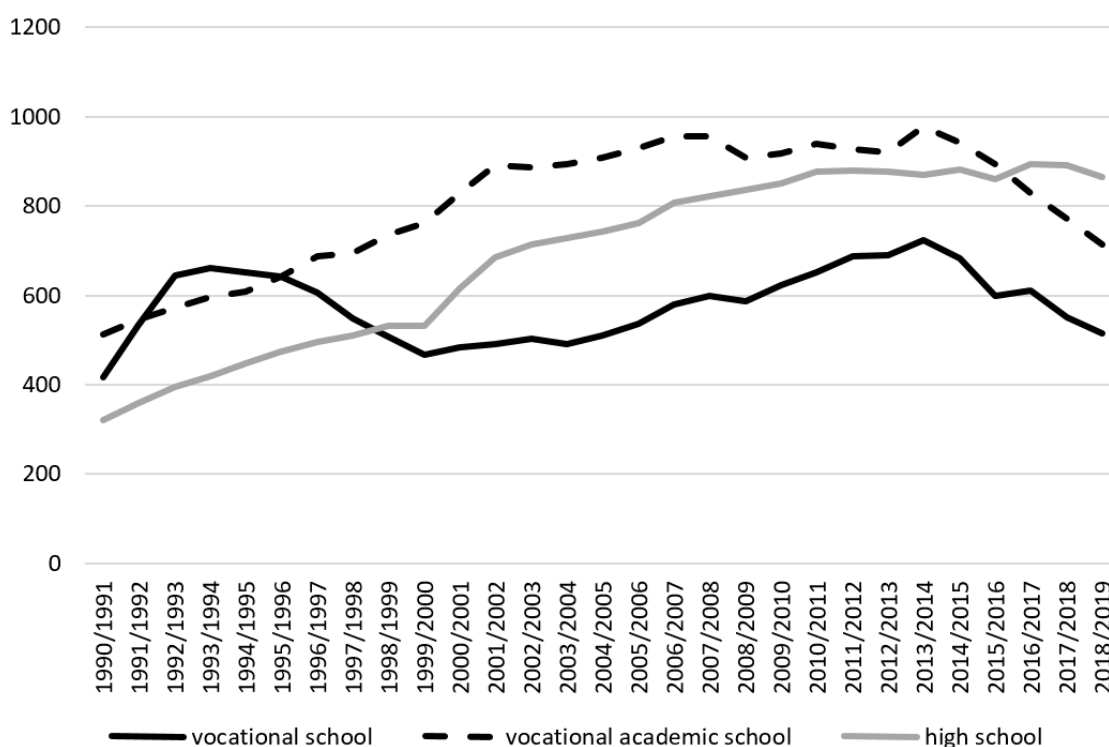


Source: KSH STADAT, self-edited

Figure 7. clearly shows that the number of pupils entering the 9th grade is constantly decreasing, as mentioned above. The data shows that as of 2012, the number of pupils moving to high school continues to rise, while vocational secondary school students are declining. This seems to be reversed in the 2017/2018 academic year. While 48,608 students continued their studies in high school in September 2017, this fell to 48,140 in September 2018. While in 2017, 36,582 students continued to study at the vocational academic school, in 2018 almost 1,000 more students, 37,520 chose this training. The losers of the three types of training were skilled workers. In 2017, 28,046 people continued their studies at a vocational worker training institution, and in September 2018 almost 2,000 (26,358) fewer started 9th grade. In total, there were 113,236 in 2017 and 112,018 in 2018, so the total loss of number of people was around 1,000, while in skilled workers there were nearly 2,000 fewer 9th graders, resulting in demographic decline.

In addition to the amendments to the usual name, the new Vocational Training Act, which will come to bear on 1 January 2020, includes substantive changes that do not always help the student to move forward. For example, they remove the possibility of preparing for a 2-year full-time baccalaureate based on the premise that vocational training can only be organised during the evening work schedule. There are a number of analyses that have shown that individuals with high school degrees are more successful in the labour market and are less at risk of unemployment. According to Hajdu and his colleagues' (2015) calculations, over the past 20 years on average, 4.8% of those with a vocational secondary school degree are unemployed, while 8% of non-graduate skilled workers do not have a job. The same is 5.6% for graduates in high school (if higher education graduates are included, 3.9%). By comparing this data we can see that the chances of individuals graduating from vocational academic school are the best, not to mention the fact that these vocational secondary schools leave open the choice for students to even go to higher education (Hermann, 2005). However, if you look at the evolution of the place of assignment of different types of secondary training (Figure 8.), we can see that, after the regime change, expansion has resulted in a year-on-year increase until 2014.

Figure 8. Evolution of the position of secondary institutions between the 1990/1991 and 2018/2019 academic years.



Source: KSH STADAT, self-edited

The decrease in the number of vocational academic schools is more significant (265 fewer than between the 2013/2014 academic year and the 2018/2019 academic year) than for vocational training (210 fewer than those who have been in the labour market than above) between the 2013/2014 academic year and the 2018/2019 academic year), despite the better chance of starting on the labour market. "The planned reduction in baccalaureate training narrows the immersion base of higher education, increases our existing higher education which is lagging behind, and worsens college and university failures due to early selection errors (Hajdu et al., 2015: 9).

Summary

In our paper we dealt with education after the primary school period. It is also shown how headcount data in different types of secondary schools have changed depending on the political impact that's been had. Today's secondary schools in Hungary have been largely left untouched by political change, although we have witnessed many reform attempts and name changes. In the changes in number of high schools, vocational academic schools and vocational schools, we can see that the demographic decrease causes number decrease in these types of institutions too, but not to an equal extent.

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