

# Factbook Education System: Uzbekistan

**Report**

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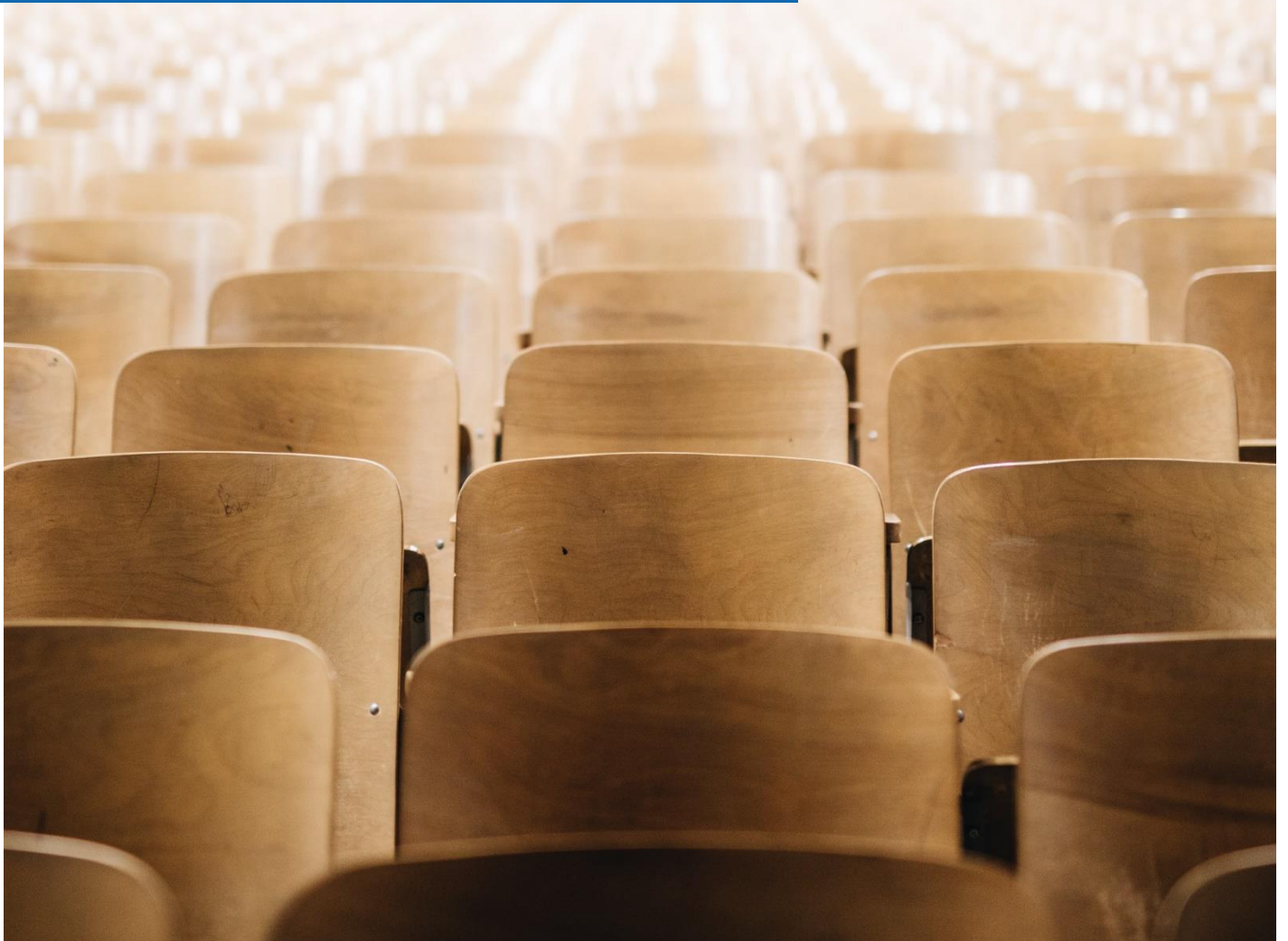
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# Factbook Education System: Uzbekistan

CES Chair of Education Systems

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## List of Abbreviations

CIA	Central Intelligence Agency
CPI	Corruption Perception Index
ESP	Education Sector Plan
EU	European Union
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GI	KOF Globalization Index
GoU	Government of Uzbekistan
GSE	General Secondary Education
ISCED	International Standard Classification of Education
KOF	Swiss Economic Institute
LFP	Labour Force Participation
MHSSE	Ministry of Higher and Secondary Specialised Education
MPE	Ministry of Public Education
NEET	Neither in Employment nor in Education or Training
NER	Net Enrolment Rate
OECD	Organisation for Economic Co-operation and Development
PET	Professional Education and Training
PTR	Pupil-Teacher Ratio
SES	State Educational Standards
SSVE	Secondary Specialized Vocational Education
STC	State Testing Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training
VPET	Vocational Professional Education and Training
YLMI	Youth Labour Market Index

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# Foreword

The increasing competitiveness of the world economy as well as the high youth unemployment rates after the worldwide economic crises in 2008/9 have put pressure on countries to upgrade the skills of their workforces. Consequently, vocational education and training (VET) has received growing attention in recent years, especially amongst policy-makers. For example, the European Commission defined common objectives and an action plan for the development of VET systems in European countries in the Bruges Communiqué on Enhanced European Cooperation in Vocational Education and Training for 2011-2020 (European Commission, 2010). In addition, a growing number of US states and other industrialized, transition, and developing countries (for example Hong Kong, Singapore, Chile, Costa Rica, Benin and Nepal) are interested in either implementing VET systems or making their VET system more labour-market oriented.

The appealing outcome of the VET system is that it improves the transition of young people into the labour market by simultaneously providing work experience, remuneration and formal education degrees at the secondary education level. If the VET system is optimally designed, VET providers are in constant dialogue with the demand-side of the labour market, i.e. the companies. This close relationship guarantees that the learned skills are in demand on the labour market. Besides practical skills, VET systems also foster soft-skills such as emotional intelligence, reliability, accuracy, precision, and responsibility, which are important attributes for success in the labour market. Depending on the design and permeability of the education system, VET may also provide access to tertiary level education (according to the ISCED classification): either general education at the tertiary A level or professional education and training (PET) at the tertiary B level. PET provides occupation-specific qualifications that prepare students for highly technical and managerial positions. VET and PET systems are often referred to together as “vocational and professional education training (VPET)” systems.

Few countries have elaborate and efficient VPET systems. Among these is the Swiss VPET system, which is an example of an education system that successfully matches market supply and demand. The Swiss VPET system efficiently introduces adolescents to the labour market, as shown by Switzerland’s 2007-2017 average youth unemployment rate of 8.1 percent compared to 14.8 percent for the OECD average (OECD, 2017).

Though not many countries have VPET systems that are comparable to Switzerland’s in terms of quality, efficiency and permeability, many have education pathways that involve some kind of practical or school-based vocational education. The purpose of the CES Education System Factbook Series is to provide information about the education systems of countries across the world, with a special focus on vocational and professional education and training.

In the CES Education System Factbook: Uzbekistan, we describe Uzbekistan’s vocational system and discuss the characteristics that are crucial to the functioning of the system. Essential components comprise the regulatory framework and the governance of the VPET system, the involved actors, and their competencies and duties. The Factbook also provides information regarding the financing of the system and describes the process of curriculum development and the involved actors.

The Factbook is structured as follows: First, we provide an overview of Uzbekistan’s economy, labour market, and political system. The second part is dedicated to the description of the formal education system. The third section explains Uzbekistan’s vocational education system. The last section offers a perspective on Uzbekistan’s recent education reforms and challenges to be faced in the future.

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The Education System Factbooks have to be regarded as work in progress. The authors do not claim completeness of the information which has been collected carefully and in all conscience. Any suggestions for improvement are highly welcome!

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# 1. Uzbekistan's Economy and Political System

One of the main purposes of an education system is to provide the future workforce with the skills needed in the labour market. The particularities of a country's economy and labour market are important factors determining the current and future demand for skills. Therefore, these are briefly described in the first part of this Factbook. In addition, this chapter provides an overview of Uzbekistan's political system with an emphasis on the description of education politics.

## 1.1 The Uzbek Economy

The Republic of Uzbekistan is a landlocked country in the heart of Central Asia with a total land area of 447,000 square kilometres and a population of 33.6 million people. Uzbekistan is the most populous country in the region, and its population is growing rapidly, with an increase of 59% in the last two decades (World Bank, 2020). Uzbekistan's population is young, with 28.8% under the age of 14 (15.1% for the same age cohort in EU28 countries; World Bank, 2020). These demographic dynamics are advantageous for the country's economic development but put significant pressure on its education system (World Bank, 2018a, p. 5). More specifically, the demographic pressure highlights a surge in demand for preschool spaces as the age cohorts between zero to three and four to seven grew the most rapidly in recent years (2.8% and 2.3%, respectively; World Bank, 2018a, p. 6).

The highly ethnically fractionalized country is home to more than 100 ethnic groups, where ethnic Uzbeks make up about 80%, while the remaining population consists of Tajiks, Russians, Kazakhs, Tatars, Kyrgyz, Koreans, and Turkmens. A by-product of strong ethnic fragmentation, Uzbekistan is characterized by multiple practiced religions and spoken languages. Uzbekistan is a secular state, with most of the population being Muslims (EACEA, 2017, p. 1).

While Uzbekistan's economic growth suffered during and immediately after its independence from the former Soviet Union in the early 1990s, its subsequent years witnessed increasingly high growth rates, followed by an economic deceleration in 2017. More specifically, the gross domestic product (GDP) grew by about 4% between 1996 and 2003, over 7% between 2004 and 2015, and more recently, about 6% (World Bank, 2020). This results in an overall annualized GDP growth rate of 6.7% for Uzbekistan from 2000–2019 (1.4% for the EU member states; World Bank, 2020). Although the Uzbek economy has grown much faster in recent decades compared to the EU28, GDP per capita is only a fraction of that in European countries (US\$6,999 in Uzbekistan while US\$44,436 in the EU28 in 2019; World Bank, 2020). Uzbekistan's strong growth rates are largely driven by the external demand for the country's commodities, including gold, copper, gas, oil, and cotton (ETF, 2010). Despite rapid economic growth, the country has not achieved poverty reduction, with 11.4% of the population still living below the national poverty line in 2018 (ADB, 2020).

Thanks to stable high economic growth, the unemployment rate gradually decreased from 8.3% in 1996 to 7.2% in 2017 (OECD average of 5.8%; OECD, 2018b).<sup>1</sup> The Central Intelligence Agency (CIA) estimates that another 20% of the labour force is underemployed, meaning that they are either highly skilled people working in low-skill jobs or part-time workers who would prefer to work full-time (CIA, 2018).

Although Uzbekistan has seen growing interdependence with the world's economies, cultures, and populations, the country still lags far behind the global average in both the economic, social, and political

<sup>1</sup> This OECD estimation stands at contrast with the officially declared unemployment rate of 0.3% (UZSTAT, 2020).

aspects of globalization. The KOF Globalisation Index measures the economic, social, and political dimensions of globalisation. It found a dramatic improvement in Uzbekistan's index value from 23.1 to 52.4 between 1991 and 2018. During this period, the world average moved from 43.3 to 61.8 (KOF, 2018). In 2007, Uzbekistan reached the 1991's average global level of globalization. In the subcomponent on economic globalization, Uzbekistan ranked 172 out of the 209 countries assessed by the KOF Globalization Index in 2015 (KOF, 2018).

Uzbekistan is a resource-rich country and a major producer of commodities, such as gold, copper, natural gas, oil, and uranium (ETF, 2010). The country also holds a strategic position in the cotton market, being the world's fifth-largest exporter and seventh-largest producer (CIA, 2018). Since the country's independence from the former Soviet Union in 1991, the Government of Uzbekistan (GoU) has largely maintained its Soviet-style command economy, with subsidies and tight controls on production, prices, and access to foreign currency. Despite numerous efforts to diversify its economy, Uzbekistan's agriculture remains largely focused on cotton. Switzerland is Uzbekistan's most important export partner for cotton, followed by China and Russia (CIA, 2018).

World Bank business surveys identify unstable electricity supply and informality as the two biggest obstacles to Uzbekistan's business environment (World Bank, 2014). The report finds that 15.7% of firms compete with informal or unregistered firms, and 97.3% of firms register formally at the start of their operations and operate for an average of two years without formal registration (World Bank, 2014). High levels of informality have serious consequences for the formal private sector and may constitute unfair competition for formal businesses because it typically involves one or more of the following activities: operating without registration, income tax evasion, labour tax evasion, or operating outside the legal framework of an economy (World Bank, 2018d).

Table 1 summarises the value added and employment by sector for Uzbekistan and the EU28. Although the numbers vary significantly, Uzbekistan and the EU28 display similar patterns for all three sectors in terms of value added and employment. In each case, the tertiary sector is the most important for both – value added and employment – followed by the secondary sector. The primary sector accounts for the lowest percentages in both value added and employment for Uzbekistan and for the EU28.

Table 1: Value added and employment by sector, 2017

Sector	Uzbekistan: Value added (%)	EU28: Value added <sup>2</sup> (%)	Uzbekistan: Employment (%)	EU28: Employment (%)
Primary sector	17.3	1.6	21.9	4.4
Secondary sector	40.2	25.0	37.7	21.6
Tertiary sector	42.5	73.4	40.4	73.9

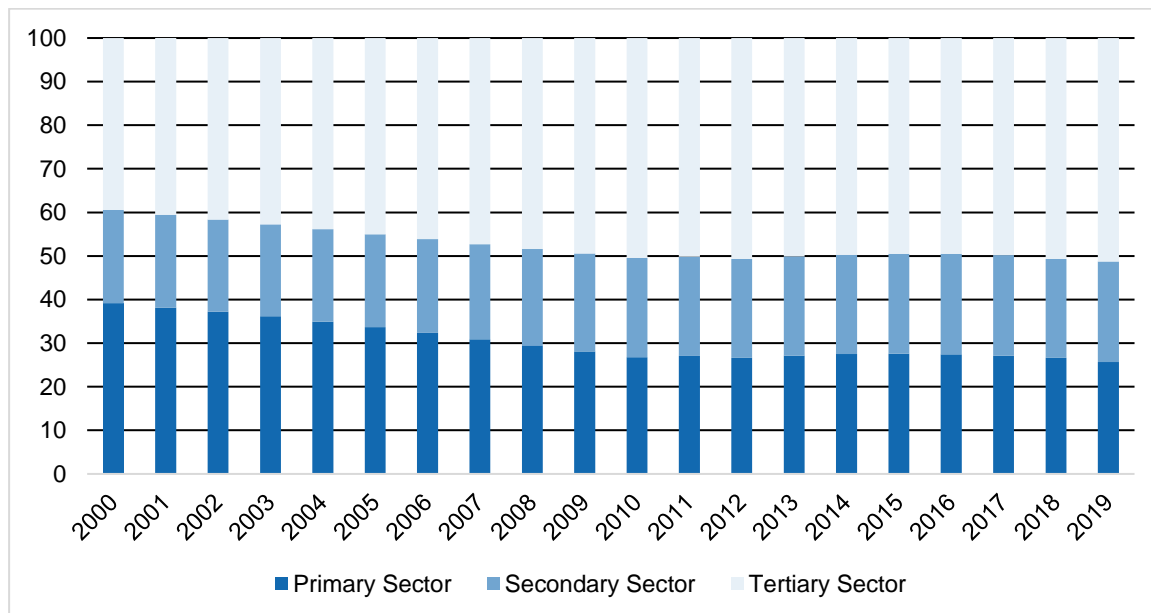
Source: own table based on Eurostat (2018).

However, employment in Uzbekistan's primary sector is substantially higher than in the EU28. In the EU28, the primary sector makes up for only 1.6% of value added and for 4.4% of employment, whereas Uzbekistan's primary sector accounts for 17.3% of value added and 21.9% of employment. Similarly, the secondary sector is far more important to the Uzbek economy than for the EU28, both in terms of value added and employment. In Uzbekistan, the secondary sector makes up for 40.2% of value added and 37.7% of employment, whereas the secondary sector of the EU28 produced only 25% of total GDP and employs only 21.6% of the labour force. Even though the tertiary sector is the most important driver of value added with 42.5%, only 40.4% of all working Uzbeks are employed in this sector. This stands in contrast to the EU28 average, where about 73.9% of all working people are employed in the tertiary sector.

<sup>2</sup> Due to rounding differences, the sum of all sector falls below 100 percent.

Figure 1 shows the development of employment by sector from 1991–2019. While the secondary sector remained relatively stable at around 37%, a shift from the primary to the tertiary sector can be observed. Despite a significant reduction in employment by the primary sector from 39% in 2000 to about 25% in 2019, this sector remains important in terms of employment and productivity. Similar to the OECD countries, the Uzbek service sector is growing. Yet, the main drivers of the Uzbek economy remain the agricultural and industrial sector due to the mining and export of commodities and the production of food and textiles.

Figure 1: Employment by sector (as % of total employment), 2000–2019



Source: own figure based on ILO (2021).

## 1.2 The Labour Market

In the first part of this section, we describe the general situation of Uzbekistan’s labour market. In the second part, we focus on the youth labour market.

### 1.2.1 Overview of the Uzbek Labour Market

The general level of labour market regulation in Uzbekistan is comparably high. The country’s constitution allows workers to form and join independent labour unions. Workers can bargain collectively and are protected against dismissal for union membership. The law further prohibits all forms of forced labour and engages in continued efforts to combat this problem. Furthermore, the law sets the minimum working age at 16 and defines a minimum wage (U.S. Department of State, 2020).

Khodjaev (2009) reports a more critical view of the Uzbek labour market conditions. He reports the extensive and largely unregulated shadow sector, low wage levels, and frequent delays in wage payments as main problems of the Uzbek labour market. Moreover, Khodjaev (2009) argues that the economic burden is borne primarily by the lower socioeconomic stratum of the population.

While the level and quality of labour market regulations are still subject to fierce criticism, the country’s regulations in the economic sphere have improved significantly in the past. Consequently, Uzbekistan ranked 69th among the 190 economies in the 2019 Ease of Doing Business Index, improving from 76th place last year (World Bank, 2021).

Table 2 shows the labour force participation (LFP) rate for Uzbekistan and the OECD average for 2017. The overall LFP rate in Uzbekistan is significantly lower compared to the OECD average. While the youth LFP rate in Uzbekistan is slightly higher than the OECD average, the opposite is true for the adult

LFP rate, which is 5.9% lower than the total LFP in Uzbekistan. The unemployment rate in Uzbekistan is only slightly higher than in OECD countries for both youth and adults. The youth unemployment rate in Uzbekistan was 14.6%, slightly above the OECD average of 13.0%. The female youth unemployment rate exceeded the male rate by 1.5% (14.0% and 15.5% for males and females, respectively). Such a large discrepancy was not observed in the average OECD economy, where gender unemployment rates are almost identical (13.4% and 13.3% for males and females, respectively; OECD, 2021).

It is remarkable how Uzbekistan's LFP and unemployment rate are comparable to those of the highly developed OECD countries, especially considering the rapid population growth the country has experienced in recent years (for more information, see Section 1.1). A recent study found that thanks to strong economic growth in Uzbekistan, job creation outpaced population growth, leading to a gradual decline in the unemployment rate in recent decades (Ajwad, et al., 2014). Specifically, Ajwad et al. (2014) found that the employment rate in Uzbekistan grew at an average rate of 2.9% per year, while the working-age population only grew at a corresponding rate of 2.6% per year from 1996–2012.

With respect to unequal access to the labour market, both Uzbekistan and the OECD display significant gender gaps in LFP rates. While in Uzbekistan, the overall female LFP rate is 24.1% lower than the male LFP rate, this gender difference in LFP rates is 8.3% in the OECD countries. The gender gap narrows significantly for Uzbekistan and is almost inexistent for OECD countries for unemployment rates.

Table 2: Labour force participation rate and unemployment rate by age in 2017

Age group	Labour force participation rate		Unemployment rate	
	Uzbekistan	OECD average	Uzbekistan	OECD average
Total (15–64 years)	65.6	71.5	7.2	5.8
Female	57.2	63.2	7.1	6.0
Male	81.3	79.6	7.3	5.7
Youth (15–24 years)	47.6	46.2	14.6	13.0
Female	34.6	42.2	15.5	13.2
Male	57.8	50.0	14.0	13.1

Source: Own table based on World Bank (2018b).

## 1.2.2 The KOF Youth Labour Market Index

The KOF Swiss Economic Institute developed the KOF Youth Labour Market Index (KOF YLMI) to compare the youth labour market situation across countries (Renold et al., 2014). The foundation for this index is the critique that a single indicator, such as the widely used youth unemployment rate, does not suffice to describe the youth labour market situation adequately, neither does it provide enough information for a comprehensive cross-country analysis. To increase the amount of information considered and foster a multi-dimensional view, the KOF YLMI considers twelve indicators grouped into four dimensions (see the information box to the right).

The first dimension is the **Activity State**. It contains three indicators and captures the extent to which the youth are active. Youth refers to all individuals aged 15–24. The indicators are Unemployment Rate, Relaxed Unemployment Rate, and NEET Rate. The **Working Conditions** dimension consists of five indicators that capture the quality of employment. Those are the Temporary Worker Rate, the Involuntary Part-time Worker Rate, the Atypical Working Hours Rate, the In-work At-risk-of-Poverty Rate, and the Vulnerable Employment Rate. **Education**, the third dimension, aims to capture the quantity and quality of education and training via two indicators: the Formal Education and Training Rate and Skills Mismatch Rate. Finally, the **Transition Smoothness** dimension describes the dynamics of the transition

process between school and work. The indicators Relative Unemployment Ratio and Long-Term Unemployment Rate compose this dimension.

Before aggregating the indicators into a single index, each indicator value is rescaled into an indicator score that takes values between 1 and 7, where higher scores suggest more desirable outcomes. The data for the indicators are collected from different international institutions and cover up to 178 countries from 1991 onward. Unfortunately, data is not available for all countries in each year. Hence, one of the major limitations of the KOF YLMI is data availability. When data is lacking, a dimension can occasionally be based on a single indicator or must be omitted entirely when not a single indicator for that category has data available. A lack of indicators can make comparisons across countries or groups of countries problematic and sometimes impossible.

Dimensions and indicators of the KOF YLMI
<b>Activity State</b> - Unemployment Rate - Relaxed Unemployment Rate <sup>3</sup> - Neither in Employment nor in Education or Training Rate (NEET rate)
<b>Working Conditions</b> - Temporary Worker Rate - Involuntary Part-time Worker Rate - Atypical Working Hours Rate - In Work at Risk of Poverty Rate <sup>4</sup> - Vulnerable Employment Rate <sup>5</sup>
<b>Education</b> - Formal Education and Training Rate - Skills Mismatch Rate
<b>Transition Smoothness</b> - Relative Unemployment Ratio <sup>6</sup> - Long-term Unemployment Rate <sup>7</sup>
Source: Renold et al. (2014)

### 1.2.3 The KOF Youth Labour Market Index for Uzbekistan

Like many other countries, Uzbekistan suffers from a lack of data across several indicators relevant to the KOF YLMI. Only three of the 12 indicators were available for 2017. The available indicators used to calculate the KOF YLMI for Uzbekistan are the unemployment rate, the vulnerable employment rate, and the relative unemployment ratio.

Figure 2 shows the KOF YLMI Spiderweb for Uzbekistan and the OECD for 2017. Uzbekistan's overall index – which is the average across all available indicators – was about 4.3 in 2017, far below the OECD average of 5.3. In terms of individual indicators, Uzbekistan ranks slightly higher in the unemployment rate and the relative unemployment ratio than the OECD average but exhibits dramatically worse performance in the vulnerable employment rate. Since Uzbekistan's KOF YLMI is calculated from only three of the 12 indicators, comparisons with the OECD should be made with caution. Nonetheless, we contrast the evolution of this reduced KOF YLMI for Uzbekistan with the OECD average.

Figure 3 shows the overall KOF YLMI for Uzbekistan and the OECD from 2000–2017. The index value for the OECD average was consistently higher than Uzbekistan's, implying that the youth labour market situation in OECD countries compares favourably with the market situation faced by Uzbekistan's youth. While the KOF YLMI for the OECD remains largely constant over the observed period, a slightly positive trend can be identified for Uzbekistan. Although we must re-emphasise the limitations of the KOF YLMI for Uzbekistan due to data availability, the gap has decreased slightly over the last two decades.

<sup>3</sup> Is calculated as the number of unemployed and discouraged workers as a share of the entire labour force. Discouraged workers have given up the search for work (not actively seeking), although they have no job and are currently available for work (also: "involuntary inactive").

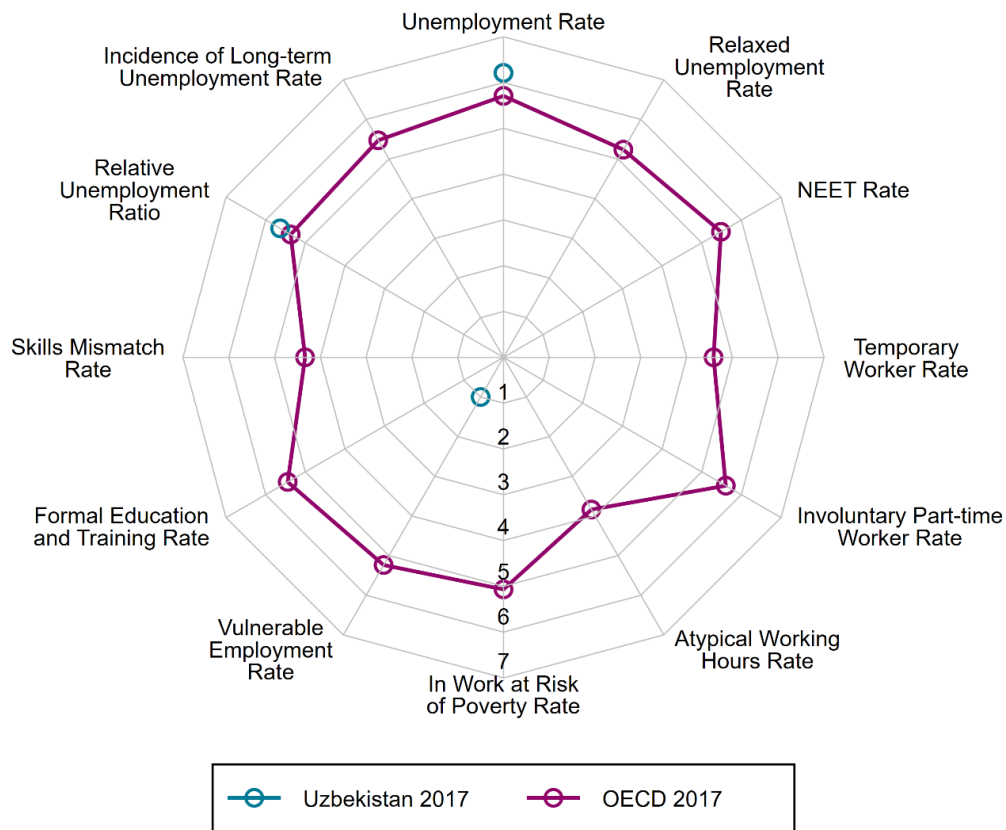
<sup>4</sup> Those who cannot make a decent living out their earnings. It is calculated as the number of youth at work but earning less than 60% of the median national income as a percentage of the total working population.

<sup>5</sup> Share of the employed population working on their own account or those working in their family business and thus contributing to the entire family income. Both are less likely to have formal work arrangements and are therefore less protected by labour laws and more exposed to economic risk.

<sup>6</sup> Is defined as the youth unemployment rate (15-24 years) divided by the adult unemployment rate (25+). If the youth cohort is affected in the same way than the adult group with respect to unemployment, then the relative unemployment ratio will be equal to one. If the youth are relatively more affected, then the ratio will be larger than one.

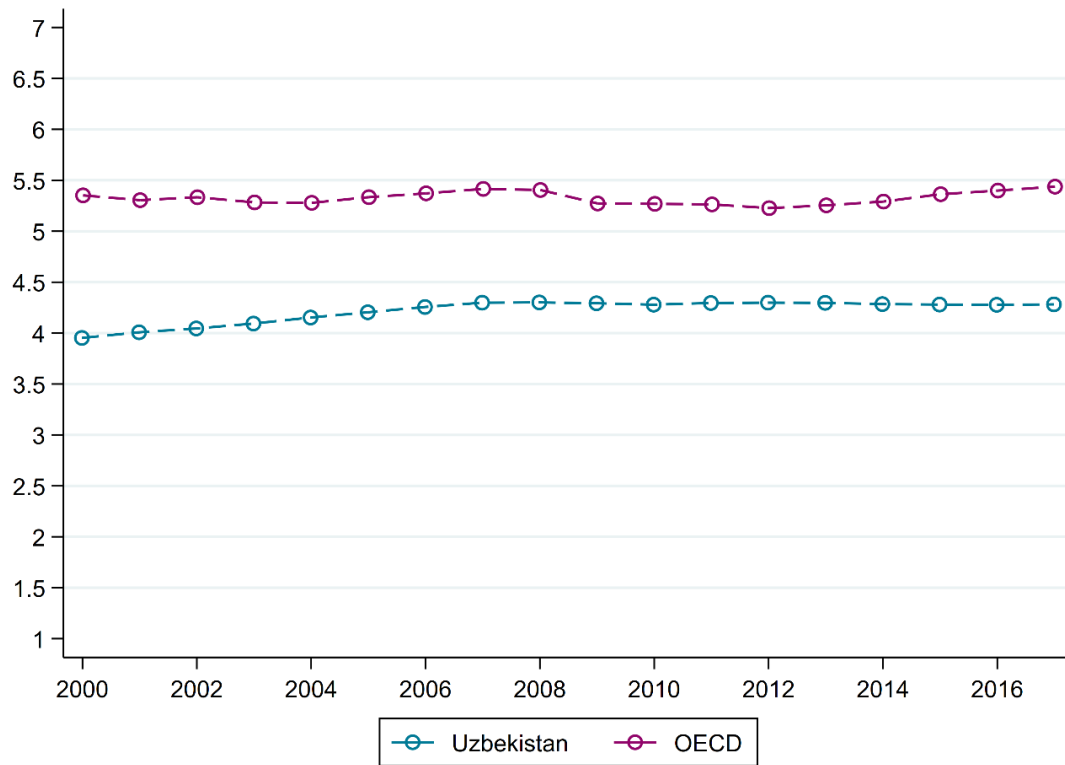
<sup>7</sup> Those unemployed for more than one year (52 weeks) as a share of the total number of unemployed (according to the ILO definition).

Figure 2: YLMI Spiderweb: Uzbekistan and the OECD, 2017



Source: KOF (2018).

Figure 3: Evolution of the YLMI: Uzbekistan and OECD, 2000–2017



Source: KOF (2018).

## 1.3 Uzbekistan's Political System

Understanding the basics of a country's political system and getting to know the political goals with respect to its education system are crucial points for the understanding of the education system in a broader sense. In the first part, we explain Uzbekistan's political system in general. The politics and goals regarding the education system are referred to in the second part.

### 1.3.1 Overview of the Uzbek Political System

Since its independence from the Soviet Union in 1991, Uzbekistan has been a presidential republic. In this system, the president chairs the cabinet of ministers and exercises executive power. The president is both the head of state and the head of government (Kendzior, 2016). Islam Karimov was the country's first president and architect of the Uzbek political structure, ruling Uzbekistan from 1991 until his death in 2016. After the death of President Karimov, former Prime Minister Shavkat Mirziyoyev was appointed interim president and, four months later, elected president in a popular vote. According to the official results, he won the election in a landslide with 89% of the vote (CIA, 2018).

International election observers criticized that the elections did not meet basic standards and, therefore, refused to cooperate. Mirziyoyev successively consolidated presidential decision-making power and ran initiatives to develop the private sector (CIA, 2018). The former president considered Islamic fundamentalism and terrorism a major threat to the country and repeatedly cited this to justify his authoritarian rule to the public and the international community (Kendzior, 2016).

The following paragraphs on recent political reforms in Uzbekistan draw on Bowyer (2018). Mirziyoyev's campaign political platform focused heavily on the idea of open and transparent government to serve the needs of the people. His campaign promise included more tangible direct levers, such as direct communication between government officials and citizens through electronic channels, social media, and forums, such as town halls and public meetings. During his tenure, he quickly introduced measures to make local governments more accountable by expanding direct elections and encouraged citizen groups to monitor the work of local and national governments. In addition, Mirziyoyev initiated a radical transformation process aimed at promoting political competition, addressing human rights, and developing a civic culture consistent with the country's status as a modernizing, forward-looking regional power. To advance this agenda, Mirziyoyev issued three key documents: a judicial and legal system reform program, a 2017–2021 action plan focused on five priority areas, and comprehensive administrative reform. With the intention of increasing voter responsiveness, the president proposed that members of the executive branch be elected directly by the people rather than appointed by the president. In August 2017, legislation was amended to allow direct election of the governors of 12 provinces and the city of Tashkent.

The Globalization Index (GI) measures the economic, social, and political dimensions of globalization. While Uzbekistan only ranked 167 out of 185 countries in 2015, it was placed 132 out of 203 countries in 2018 (scoring 41.2 and 52.4 respectively; Gygli et al., 2019). This marks a drastic improvement since President Mirziyoyev took office in 2016. Uzbekistan continues to perform rather poorly in the "political globalization" subdimension of the GI, scoring only 49.9 against a world average of 62.0.

The Corruption Perception Index (CPI) ranks Uzbekistan 157th out of 180 countries in 2017, with an index score of 22 (world average score of 43; Transparency International, 2017). The CPI aggregates data on the perceptions of country experts and businesspeople focused on the level of corruption in the public sector. From 2006–2016, the World Bank's Political Stability and Absence of Violence/Terrorism indicator improved from a percentile rank of 7 to 34 for Uzbekistan (World Bank, 2016). This World Bank report also ranks Uzbekistan poorly on corruption control, the rule of law, regulatory quality, and government effectiveness, while government effectiveness improved significantly during the observed period.

## 1.3.2 Politics and Goals of the Education System

The following paragraphs describe the distribution of responsibilities in the Uzbek education system drawing on EACEA (2017, p. 4). The Education Act assigns responsibility for implementing education policy to the Cabinet of Ministers. It is the shared responsibility of the Ministry of the Public Education (MPE) and the Ministry of Higher and the Secondary Specialized Education (MHSSE) to manage the education system. In particular, the MHSSE administers upper secondary and tertiary education, including VPET. The MPE is directly responsible for preschool, general, special, and out-of-school education (UNESCO IBE, 2011). The State Testing Centre is subordinated to the Cabinet of Ministers and organizes admission examinations for public higher education institutions, controls the quality of teachers, and issues licenses to private educational institutions. On a more top-down level, central state bodies are responsible for certain aspects of the education system. While the Ministry of Economy makes forecasts for economic development and population growth, the Ministry of Labour makes forecasts for the labour market and develops and implements programs for vocational training and training for the unemployed.

After Uzbekistan's independence, the Parliament approved an education reform to align the education system with the principles of a democratic, free-market economy and improve the quality of schooling. One of the reform's major goals was to increase the system's responsiveness to economic trends and developments in the labour market (UNESCO IBE, 2011).

Despite a comparatively strong human capital base, there are many challenges to a better education system in Uzbekistan. Although Uzbekistan performs well in terms of literacy and enrolment at all levels of education and for both genders, human capital accumulation is still hampered by several factors, including low public spending per student, low completion rates for advanced degree programs, and centralized control over curriculum development (OECD, 2013, p. 23). All these factors lead to a mismatch between workforce supply and demand, which ultimately hinders the country's economic prosperity.

# 2. Formal System of Education

## 2.1 Formal System of Education

Uzbekistan's current formal education system is divided into three distinct, sequential levels: Pre-primary education, general secondary education (GSE), and higher education. The education sector has undergone extensive reforms in recent years, particularly at the primary and lower secondary levels. This chapter discusses both the old primary-secondary school model and the new GSE school model, as the old model is still partly relevant. This is because while relevant policy changes have been formally adopted, some have only recently been implemented or are still being implemented at the time of writing this Factbook. Figure 4 presents Uzbekistan's formal education system graphically.

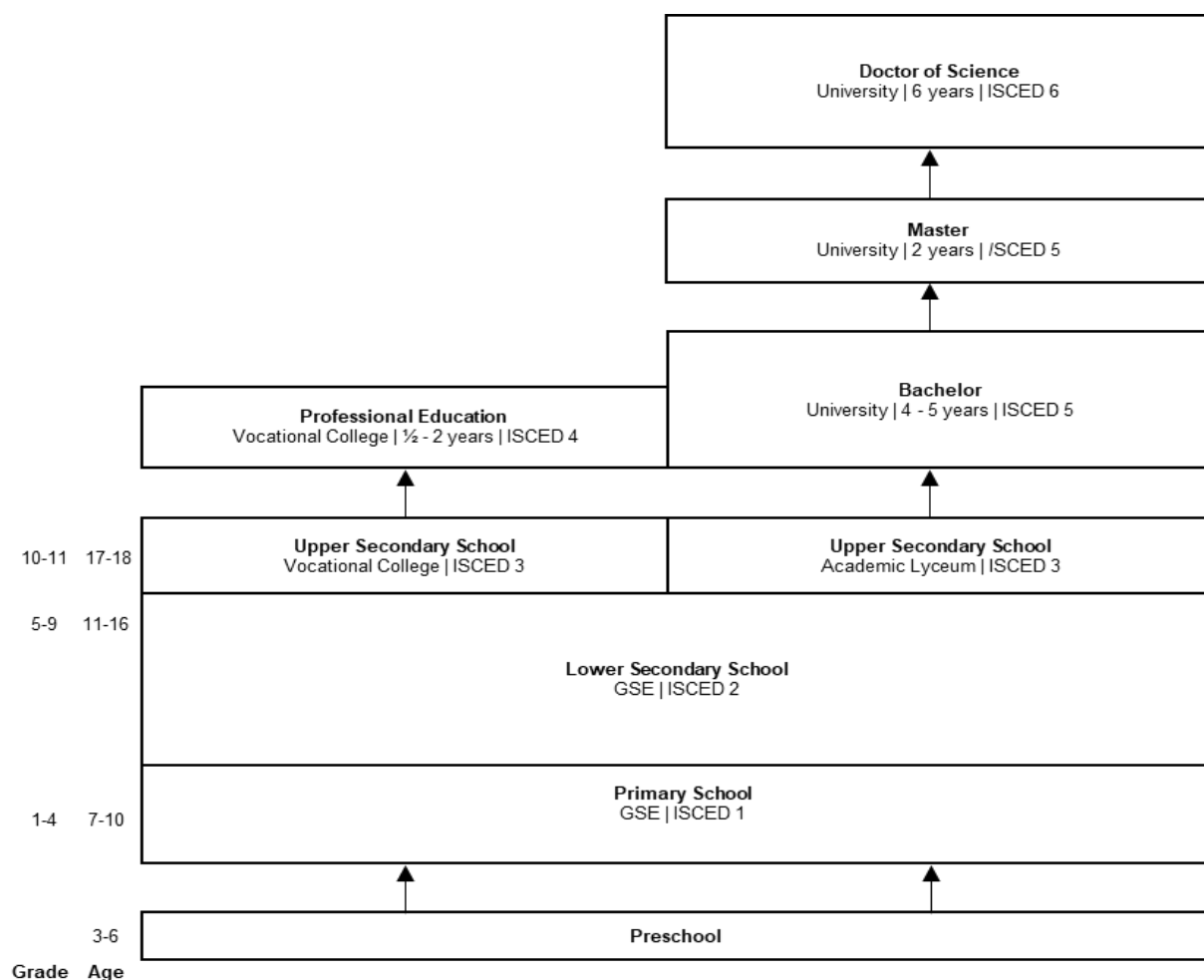
The following section builds on the World Bank's Education Sector Analysis Report system (2018a, p. 11 et seq) and a recent GoU report on educational sector reforms (2019b, p. 22 et seq) and describes the changes in Uzbekistan's formal education system. Formal education starts with optional non-free preschool for zero-to-five year-olds. From the 2021/22 school year, it is compulsory for six-year-olds to attend one year of compulsory preschool education, which was optional until then. In both the current GSE and the old model, children reaching seven years of age are automatically advanced to primary school (now integrated into the GSE track). Until 2017, compulsory education consisted of nine years, four years of primary school (grades 1–4) and five years of lower secondary school (grades 5–9). The new education reform increased overall school attendance by two years, adding grades 10 and 11.



Under the new reformed 11-year GSE school model, pupils who have completed primary and lower secondary school (grades 1–9) can choose one of three different modalities.

1. Under the first modality, the two additional years of compulsory education are used for vocational training to ensure that students acquire practical training and skills. These programs are offered by the same GSE schools that teach grades 1–9. After completion of the standard of 11 years of GSE, students enter the labour market.
2. The second modality also includes 11 years of GSE, with an additional half a year to two years in a vocational college, depending on the specialization. This professional education at the upper secondary level helps students acquire relevant skills used in the labour market in more complex positions.
3. The third modality is for students who wish to pursue an academic career. These students can opt to leave GSE after nine years and instead attend two years of general education at an academic lyceum for grades 10 and 11. Upon completion of the two years of general education, students can enter higher education.

Figure 4: The Uzbek Education System



Source: own display based on World Bank (2018a).

Higher education consists of undergraduate and graduate programs available from several universities and over 50 higher education institutes (Scholaro, 2021). Undergraduate degrees include bachelor's university programs with a duration of four to five years. Admission to a bachelor's university program requires the completion of nine years of GSE, followed by two years of the academic lyceum, and participation in the central nationwide high school exam. Graduate programs include academic and research-oriented programs, such as master's programs of two years and doctoral programs of six years. The peculiarity of the Uzbek doctoral program is that it consists of two separate stages. First, a two-year

Candidate of Science track has to be completed to then move to the three-year Doctor of Science program (UNESCO IBE, 2011). From 2013, these two scientific degrees were replaced by a single level of Doctor of Sciences (*Fanlar Doktor*).

The overall governance and decision-making processes of the education system are shared by the MPE and MHSSE. The MPE is responsible for preschool, GSE, special education, and pedagogical teacher training. As indicated by the Ministry's name, the MHSSE is responsible for upper secondary and tertiary education, including vocational education (UNESCO IBE, 2011).

Table 3 shows the GER<sup>8</sup> and NER<sup>9</sup> by education level for 2019. The NER quantifies the total number of students in the theoretical age group for a given education level enrolled at that level expressed as a percentage of the total population of that age group. The GER quantifies the number of students enrolled at a given education level – irrespective of their age – as a percentage of the official school-age population corresponding to the same level of education. For example, for the primary education level, the NER indicates how many students at the typical primary school age are enrolled in primary school, while the GER sets the actual number of students in primary education – irrespective of their age – in relation to those who are in the official age to attend primary education.<sup>10</sup>

Table 3: Net enrolment rate (NER) and gross enrolment rate (GER), 2019

Education level	ISCED 2011	Net enrolment rate	Gross enrolment rate
Pre-primary education	020	31.9	33.0
Primary education	1	96.2	102.2
<i>Female</i>	1	NA	101.6
<i>Male</i>	1	NA	102.8
Secondary education	2–3	93.5	97.4
<i>Female</i>	2	NA	97.2
<i>Male</i>	2	NA	97.7
Tertiary education*	5–8	NA	9.0
<i>Female</i> *	5–8	NA	6.0
<i>Male</i> *	5–8	NA	11.0

Source: UIS UNESCO (2020a) and \* from World Bank (2018a, p. 2).

The GER for primary education exceeds 100%, meaning that the primary school student body is more than 100% of the theoretical school-age population for this education level. This can either be caused by over-aged or under-aged students because of late or early entrants and grade repetitions. To fully understand the causes, a rigorous interpretation of the GER needs additional information to assess the extent of repetition, late entrants, and more factors. More generally, the above-presented statistics compare Uzbekistan's school enrolment rates favourably to the rest of the world. This reflects the legacy of both Soviet investment in social infrastructure and post-independence efforts, particularly in primary

<sup>8</sup> The UIS UNESCO (2020a) defines the gross enrolment rate as the “number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.”

<sup>9</sup> The UIS UNESCO (2020a) defines the net enrolment rate as the “Total number of students in the theoretical age group for a given level of education enrolled in that level, expressed as a percentage of the total population in that age group.”

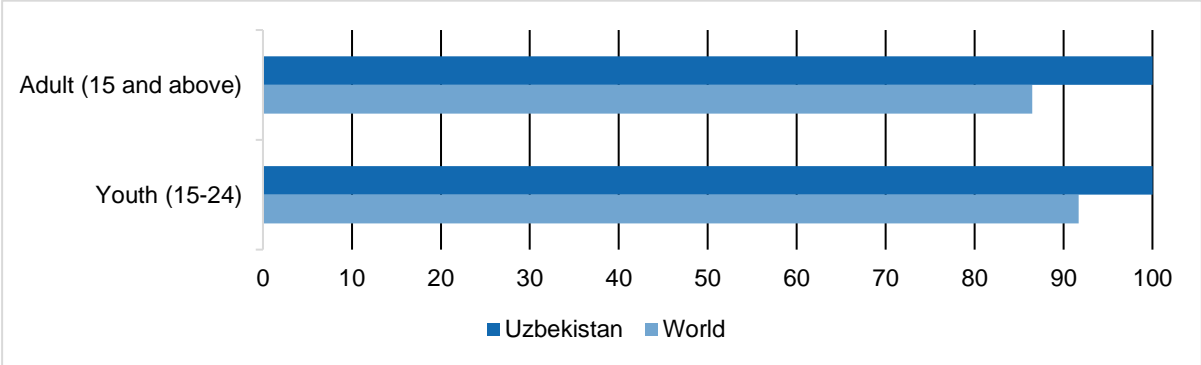
<sup>10</sup> A gross enrollment rate of 100 corresponds to a situation where each child in a given country is enrolled in the corresponding education level. A value above 100 could occur due to students who are older than the typical enrolment age for primary education (e.g. have to repeat grade, adult learners). A value below 100 implies that not everyone who is in the typical age for primary education is actually enrolled.

education (ETF, 2010, p. 2). Enrolment in compulsory primary and lower secondary education are largely universal and with no significant gender-based attendance differences. In stark contrast to the nearly universal enrolment in GSE, Uzbekistan’s preschool enrolment rate is extremely low. At approximately 32%, voluntary preschool enrolment is extremely low compared to other countries, such as Kazakhstan with 60%, Moldova with 82%, Russia with 85%, and Japan with 90% (World Bank, 2018b, p. 25). Due to the universal primary school attendance rate, adult literacy was estimated to be 99.9% in 2019 (UNESCO UIS, 2020b). Similarly, other educational indicators in Uzbekistan perform well. For example, the share of the population that has at least completed upper secondary has risen from 91.4% in 2013 to 96.2% in 2018, which is significantly higher than in the U.S. with 89.8% (UNESCO UIS, 2020b).

The return on investment for additional education in the Uzbek education system is large both in terms of employment rate and wage premium. While the employment rate of upper secondary vocational education graduates stands at 57%, the employment rate for higher education graduates increased by 20%. Similarly, the wage premium for higher education graduates relative to upper secondary vocational education graduates is 55% (World Bank, 2018a, p. 3).

The adult literacy rate is among the most widely used and relevant indicators for measuring the existing quality of human capital formation, as access and efficiency of the formal education system have been shown to influence literacy rates over time (IADB, 1996, p. 8). Therefore, Figure 5 compares adult and youth literacy rates in Uzbekistan with the world average. Universal primary school enrolment in Uzbekistan appears to be reflected in a 100% literacy rate for both adolescents and adults. This contrasts with the world average, which is 92% for youth and 85% for adults (UNESCO, 2020b)

Figure 5 : Literacy Rate, 2019



Source: own figure based on UIS UNESCO (2020b).

## 2.2 Preschool Education

The new education law stipulates that preschool education provide for compulsory one-year preparation of children aged six to seven for primary education. Preschool education is mostly provided by public institutions, but private institutions in family schooling have gained importance (UNICEF, 2017, p. 17). Non-traditional home kindergartens emerged in the late 20<sup>th</sup> century and are predominantly located in rural areas. The MPE administers and organizes preschool education, which can broadly be grouped into nurseries for children aged one to three and kindergartens for children between four and six years old (UNESCO IBE, 2011).

While nurseries primarily protect the children’s lives and improve their health, kindergartens are educational and recreational institutions with additional, highly specified national regulatory frameworks and clearly defined objectives. According to the educational program for kindergartens, this involves developing cognitive interests, forming a personality, ensuring intellectual and physical development, familiarizing with national culture and universal values, and preparing the children for school (UNICEF, 2017, p. 5). However, the Uzbek government’s new Education Sector Plan (ESP) 2019–2023 states that due

to the neglect of the preschool curriculum's development and implementation, attendance does not contribute significantly to children's school readiness and learning in the primary grades (GoU, 2019a). At the preschool level, all children are advanced to the next year, and the system does not allow repetitions or dropouts.

Quality standards among different education institutions are uneven, with only around 20% of all PET teachers having a higher education degree (UNESCO IBE, 2011). The MPE requires PET teachers to hold at least a secondary special education degree, while tertiary education is not required (UNICEF, 2017, p. 17). A decree from 2018 raised salaries of preschool kindergarten teachers (those teaching five- and six-year-olds) by 30%, making them the same as those of primary and general secondary school teachers (GoU, 2019a).

As discussed in the previous chapter, access to preschool education is extremely low and constitutes one of the major challenges for the Uzbek education system (World Bank, 2018a, p. 25). Today's attendance is predominantly from urban families in upper percentile income groups, while rural children from low-income families have extremely limited access (in urban and rural areas, 45% and 21%, respectively) (UNICEF, 2017, p. 5). According to the World Bank's Education Sector Report, the GoU announced its spatially phased approach with the goal of expanding access to preschool education (World Bank, 2018a, p. 11). In the school year 2021/22, it will be compulsory for all five- to six-year-olds to be enrolled in preschool education. Therefore, they established the Ministry of Preschool Education to administer and manage this core subsector instead the previously responsible MPE. To stimulate demand for preschool education, the government twisted the fee structure to reduce fees for children in rural areas and grant free access to children from socioeconomically weak backgrounds (GoU, 2019a, p. 19). While these measures aim to increase demand for preschool education, the government also installed measures to increase the supply of preschool institutions through promoting public–private partnership models and cost incentives for private preschool providers (GoU, 2019a, p. 19).

As of 2018, before the expected impact of current reforms to expand service provision in partnership with the private sector, preschool education was almost entirely provided by public preschools. Only 2% of three- to seven-year-olds were enrolled in private preschools, most of them in the capital Tashkent (World Bank, 2018a, p. 25).

The Pupil–Teacher Ratio (PTR) at the preschool level diverges between rural and urban schools. While urban preschools have a PTR of around 25:1, rural preschools have a PTR lower than 5:1 (GoU, 2019a, p. 27). At 77%, a large proportion of preschool teachers have only a secondary vocational qualification (GoU, 2019a, p. 27).

## 2.3 General Secondary Education

The law on education stipulates that primary and lower secondary education is a universal right, meaning that every child in the respective age cohort is guaranteed equal rights to free education (UNICEF, 2017, p. 17). In 2017–2019, Uzbekistan expanded compulsory primary and secondary school from nine to 11 years with two additional grades 10 and 11 (GoU, 2019a, p. 22). In this section, we first focus on the old 4+5-year system and explain some relevant statistics. Later on, we turn to the new 11-year GSE school system.

Starting in first grade, GSE is compulsory and free, resulting in nearly universal enrolment. The gross enrolment ratio (GER) in GSE in 2019 was around 99%. Comparing enrolment rates of grades 1–4 to grades 5–9, with 102% and 97%, respectively, we find slightly higher enrolment in lower grades (UNESCO, 2020a). However, no data is available yet for enrolment in the recently expanded grades 10 and 11. There are, however, significant variations across regions, with a GER in GSE of around 110% in the urban capital region of Tashkent and only 86% in the rural region of Karakalpakstan (GoU, 2019a, p. 28). General education develops basic learning, scientific, and cultural knowledge, as well as moral education, labour skills, and creativity, and is predominantly taught in the Uzbek language (UNESCO IBE, 2011).

According to Resolution No. 187, all subjects taught at the GSE level have detailed state standards, including hours spent per subject, curriculum, skills requirement, and an evaluation system. These state standards clearly define how students should acquire specific skills but lack systematic and standardized assessment of student learning outcomes (World Bank, 2018a, p. 77).

In primary school, students are grouped independently of their intellectual ability and development, and those who fail to perform are required to repeat the class. Students can repeat a class twice, but if unsuccessful, they are transferred to schools for the mentally impaired (UNESCO IBE, 2011). According to the World Bank's 2018 Education Sector Analysis Report, 99% of primary school students (grades 1–4) in Uzbekistan complete that level of education and successfully transition into lower secondary school. Out of these pupils, nearly 91% make it to grade 9 and successfully graduate from lower secondary school (World Bank, 2018a).

The following information about the educational institutions providing general education (primary and lower secondary school) in Uzbekistan is obtained from UNSECO-IBE (2011). General education is provided in over 9,000 institutions enrolling more than five million students. Several types of educational institutions provide general education. Some only provide primary education (grades 1–4), partial education (grades 1–9), and complete (1–11) secondary education, while others offer specialized education and boarding schools for pupils with disabilities. Some newer forms of educational institutions, such as gymnasia and lyceums, tend to provide better quality and are attached to higher education institutions. An overwhelming majority of more than 99% of students enrolled in GSE attended public institutions in 2017, with the majority of private GSE students enrolled in the city of Tashkent (World Bank, 2018a, p. 33).

In the newly reformed system, compulsory GSE was expanded from nine to 11 years of study. After the first four grades, students are still advanced to lower secondary school, where they must choose between two tracks, one academic and one vocational track. For the general academic track, where students enter academic lyceums, the study program has been condensed from three years to two years (GoU, 2019a, p. 20). For the specialized vocational track, students remain in the GSE schools.

The PTR at the GSE level is low at around 13:1. The lowest ratio was reported in rural and sparsely populated districts, such as Karakalpakstan and Navoi (9:1), while the highest ratio was reported in Tashkent (21:1) (GoU, 2019a, p. 38 et seq).

## 2.4 Post-Secondary and Higher Education

The higher education system is primarily managed by the MHSSE, while other governmental bodies hold different responsibilities (for instance, the Cabinet of Ministers takes strategic decisions, and the Ministry of Economy decides on the number of places provided in higher education) (GoU, 2019a, p. 23). As of 2019, there are 85 national higher education institutions, with 42 under the authority of the MHSSE. There are significant regional disparities, as roughly 50% of those 85 institutions are concentrated in the capital city of Tashkent (GoU, 2019a, p. 47). The following paragraph providing information on the structure and peculiarities of the Uzbek higher education system is based on EACEA (2017, p. 7 et seq).

Undergraduate programs have a minimum study duration of four years<sup>11</sup>, and upon completion, students receive a bachelor's degree and a diploma (*Bakalavr*). This entitles graduates to enter the labour market or continue their studies at the graduate level. An overwhelming majority of 95% of the students enrolled in higher education in Uzbekistan attended a bachelor-level course in 2017, of which only 4.5% continued their studies on a master's program (GoU, 2019a, p. 47). Graduate programs have a minimum duration of two years, and upon completion, graduates are awarded a diploma (*Magistr*). This diploma

<sup>11</sup> While most Bachelor programmes at public universities have a duration of four years, Bachelor's education in medical specialties can take between five and seven years (EACEA, 2017, p. 11).

entitles graduates to enter the labour market or continue their studies at the postgraduate level. Before a change in legislation in 2012, postgraduate education was offered in a two-stage program, including two 2-year scientific programs, “Candidate of Sciences” and “Doctor of Sciences.” From 2013, these two scientific degrees were replaced by a single level of Doctor of Sciences (*Fanlar Doktori*).

Although the Education Act from 1997 allows the creation and operation of non-government education and training providers, so far, there are no registered private higher education institutions in Uzbekistan (EACEA, 2017, p. 5). Public institutions at the higher education level in Uzbekistan can be divided into the following three types (EACEA, 2017, p. 8):

1. Universities providing educational programs at undergraduate, graduate, and postgraduate levels in various fields of knowledge. Additionally, universities also offer re-training and upgrading of skills for experienced specialists in different sectors. As of 2017, Uzbekistan has a total of 32 universities, including 20 public universities, their six branches in regions, and six branches at overseas universities.
2. Academies providing educational programs in specific disciplines, including medicine, state taxes, public administration, and banking and finance. As of 2017, the country is home to a total of six academies.
3. Institutes providing educational programs at undergraduate, graduate, and postgraduate levels in specific branches of study within one area of knowledge. As of 2017, there are 44 institutes, including 36 public institutes, their seven branches in regions of the country, and one branch of an overseas higher education institution.

Admission requirements for enrolment in higher education are defined annually by the Cabinet of Ministers (EACEA, 2017, p. 9 et seq.). Students seeking to take the higher education entrance exams are typically required to submit detailed documentation about their previous education, medical certificates, identification, and additional documents certifying the right for beneficial treatment (talent, disability, military service). Students can only apply to one university and field of study at a time. Once admitted to the examinations, the State Testing Centre (STC) organizes a multiple-choice testing system to assess the students’ abilities. Prospective students who fail to obtain a place in the applied university must wait at least one year for the next national exam (World Bank, 2018a, p. 40). Preferential treatment is given to students based on their performance on the national exam, both for state grants and contract-based quotas (World Bank, 2018a, p. 40).

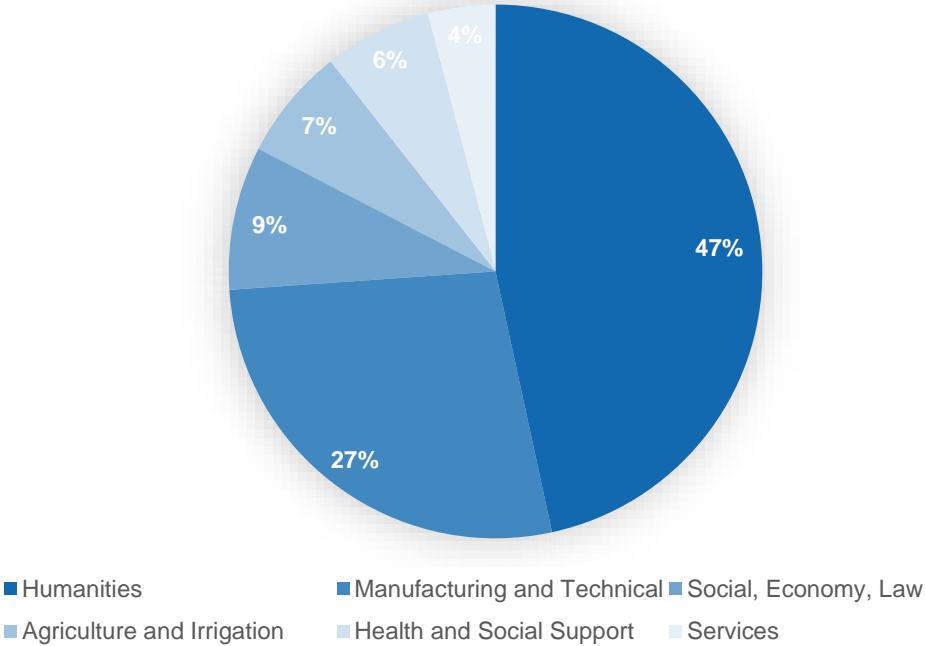
The State Educational Standards centrally define the structure and content of the higher education curriculum, and universities have little flexibility to make adjustments.<sup>12</sup> A recent World Bank report attributes outdated curricula that are irresponsive to the labour market needs to this lack of adjustment opportunity (2018a, p. 66). Students’ progression to the next year is based on academic achievements; that is, they must pass all subjects to be transferred to the next year. At the end of higher education programs, students are required to take a final state exam and defend their final qualification work (EACEA, 2017, p. 11).

Figure 6 shows the distribution of bachelor students by field of education. For the cohort that graduated in the 2018/2019 academic year, 46.6% graduated in humanitarian studies, 27.3% in manufacturing and technology, 8.7% in social, economy, and law, 6.8% in agriculture and irrigation, 6.5% in health and social support, and 4.1% in services. This student cohort consisted of approximately 67,000 students, 61.6% male and 38.4% female (GoU, 2019b). At the master's level, 12,000 students graduated in the

<sup>12</sup> Higher education institutions may introduce a 5% change in the standard curriculum (World Bank, 2018a, p. 66).

same year, of whom 34.9% received degrees in humanitarian fields, 21.7% in manufacturing and technology, 19.8% in social, economy, and law, 16.0% in health and social support, 4.9% in agriculture and irrigation, and 2.7% in services.

Figure 6: Distribution of undergraduate students by areas of education in 2019



Source: Own graph based on GoU (2019b).

## 2.5 Teacher Education

Teacher training should predominantly take place at a higher education institution; that is, at institutes and universities. While preschool teachers are required to have a minimum qualification from a pedagogical college (upper secondary level), teachers at the preschool and GSE levels (grades 1–11), including lyceums and colleges, must have graduated from a higher education institution (GoU, 2019a, p. 45). Pedagogical colleges at a vocational college have a duration of two years (World Bank, 2018a, p. 42).

However, the reality in the Uzbek education system is different, as the information on teacher professional development provided by GoU (2019a, p. 58 et seq) highlights. Indeed, due to a lack of collected data on the training of preschool teachers, little is known about the relevant education of teachers at each specific level. At the preschool level, many of the teachers have only a secondary vocational qualification, and only a few completed higher education (GoU, 2019a, p. 27). At the GSE level, 73% of the teachers have higher education, while 22% have only secondary education. Academic requirements for teachers of preschool and primary levels (grades 1–4) are lower than those for teachers at the lower secondary level (grades 5–11). GSE teachers must take a mostly theoretical professional development training every five years for four consecutive weeks. At the same interval, teachers must take so-called “teacher assessments” that primarily serve the purpose of promotions and salary raises but do not improve teaching practices. Only if a teacher fails two consecutive times is action is taken.

At the upper secondary VET level, only around 66% of the teachers hold a higher education degree, potentially indicating a quality concern (World Bank, 2018a, p. 71). For teachers at the higher education level, only 6% hold a Ph.D. degree and 32% a master’s degree (GoU, 2019a, p. 27). Similarly, a 2018 World Bank report found that only about 10% of the teaching staff had a Ph.D. or Candidate of Science degree, and more than 50% of all academic staff are without any scientific qualifications (2018a, p. 65).

# 3. The System of Vocational and Professional Education and Training

This chapter of the Factbook describes the VET system at the upper secondary level and PET system at the tertiary level in more detail. The VPET refers to both the VET and PET systems.

## 3.1 Vocational Education and Training (VET)

In the Uzbek education system, VET includes both lower and upper secondary levels. VET at the lower secondary level is sometimes referred to as secondary specialized vocational education (SSVE) and is carried out in GSE schools for two years (Tashkent Times, 2020). VET at the upper secondary level is referred to as professional education. Admission to professional education is an optional pathway and requires the completion of general secondary education (after grade 11). Programs in vocational colleges will last from six months to two years, depending on the specialization (GoU, 2019a, p. 22). The network of vocational colleges offering VET is optimized based on national and regional economic development priorities, labour market forecasts, and technological development (World Bank, 2018a, p. 12).p

With the 2017 introduction of the 11-year GSE through the provision of mutual integration of general education schools and professional education institutions, the scope of VET changed drastically (World Bank, 2018a, p. 42). Before this paradigm change of the Uzbek educational system, it was compulsory for students to continue their secondary education with a three-year SSVE in either an academic lyceum or a vocational college (World Bank, 2018a, p. 41). Nowadays, students can either chose to enter the labour market upon GSE completion or continue their vocational or academic studies. Because of the enlarged GSE, the duration of VET courses at vocational colleges has been reduced to between six months and two years, depending on the vocational skills required for a specific profession.

Although VET is no longer compulsory after recent education reforms, the institutions of the former SSVE remain highly important. Its network of vocational schools outnumbers non-vocational academic lyceums by a factor of almost ten, and the share of VET students in Uzbekistan is substantially high, standing at 87% (World Bank, 2018a, p. 33)<sup>13</sup>. Due to the latest reforms, enrolment in VET has decreased substantially (World Bank, 2018a, p. 34).

Similar to the GSE level, professional education curricula follow a framework defined in the State Educational Standards.<sup>14</sup> Under the old policy, the curricula for the first year of professional education were fixed and purely dedicated to general education subjects. Vocational colleges and academic lyceums displayed differences only in years 2 and 3, where colleges could adapt the curriculum by up to 10%, based on the labour market demands (World Bank, 2018a, p. 77 et seq).

<sup>13</sup> In comparison, in the Czech Republic 73% of the students attend VET, in Romania 56%, and in Spain 34% (World Bank, 2018a, p. 33).

<sup>14</sup> The recent reforms have significantly addicted both SSVE and higher education, but to the best of our knowledge, there exists no information on new curriculum regulations of professional education.



# 3.2 Regulatory and Institutional Framework of the VET System

## 3.2.1 Central Elements of VET Legislation

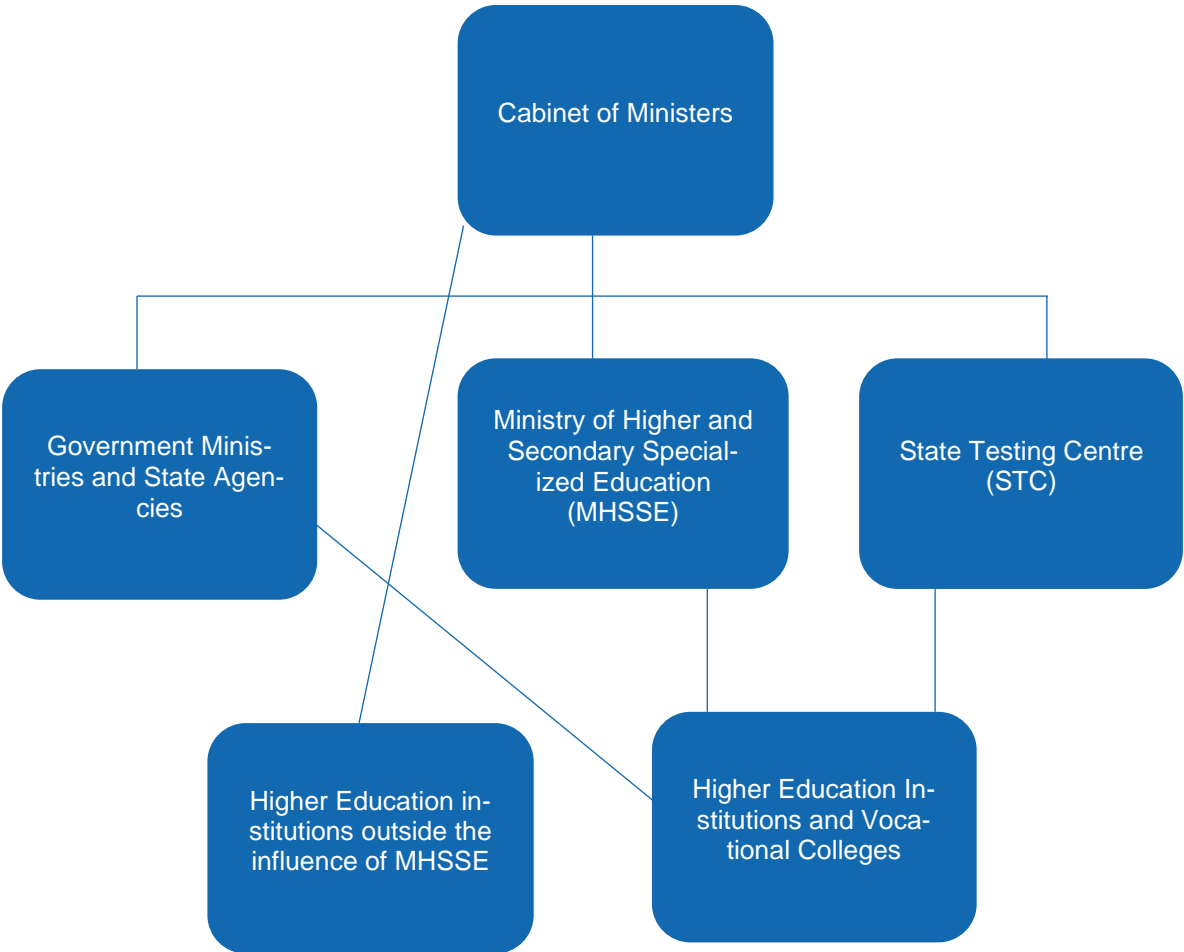
Uzbekistan’s education policy is based on the constitution, the “law on education”, and on the “national programme for personnel training” (UNESCO UIL, 2018, p. 1). In 2020, the president of the Republic signed a new law on education, invalidating the two basic educational laws from 1997 (Tashkent Times, 2020).

## 3.2.2 Key Actors

### Government

The overall governance and decision-making process of the upper secondary and tertiary education system (including vocational education) is shared by the MHSSE, the Cabinet of Ministers, and the STC (UNESCO IBE, 2011). Figure 7 illustrates the VET and higher education structure, the state competencies, and the relevant ministries. The multiple layers of accountability, resulting in the duplication of administrative control, limits the capacity of the MHSSE to manage and flexibly adapt the system to changes in demand (Weidman & Yoder, 2010, p. 63).

Figure 7: Structure and responsibilities in VET and higher education



Source: Own figure, based on Ruziev & Burkhanov (2018).

The information on the governance hierarchy of the higher education and SSVE system is based on (Ruziev & Burkhanov, 2018). The Cabinet of Ministers is responsible for all strategic decisions affecting the system. It sets the state education standards and determines funding, number of study programs, and number of students. It also approves the appointment of senior managers and determines the strategies of higher education institutions. The STC administers entrance examinations and conducts the accreditation and ranking of universities. The MHSSE's role in the administration of the higher education sector is, therefore, largely complementary and limited to the supervision of higher education institutions, the adoption of secondary legislation, the provision of methodological guidelines, and the organisation of the academic year. The MHSSE's administrative influence on higher education institutions is further weakened by the fact that of the 85 institutions supervised by the MHSSE, 43 are also subordinate to various ministries and state agencies to which they are formally affiliated. For example, the Academy of Medicine is under the Ministry of Health, and the University of Agriculture is under the Ministry of Agriculture and Water Resources (GoU, 2019a, p. 23).

## **Representation and advisory bodies**

The following information on the legally established institutions that give relevant stakeholders a say in the content of VET programs and issues related to graduates' entry into the labour market is obtained from the recent OECD report (2013, p. 92). The VET coordination councils of vocational schools require the active participation of a representation of employers' organisations and trade unions in the development of VET policy. The government gives equal weight to the contribution of employers and trade unions in the coordination council in relation to the development of educational standards, training programs, and industrial practices. Such coordination councils exist at national and local levels, and large enterprises and trade unions in larger enterprises are usually consulted at the national level and participate in the setting of VET programs, the design of occupational standards and the development of curricula, the selection of questions, and the formatting of final examinations.

Although VET systems in Uzbekistan have increased employer participation in the design and delivery of VET, such mechanisms are far less developed compared to OECD countries (OECD, 2013, p. 21). The OECD also notes the asymmetric participation of employers and trade unions; despite officially declaring equality, employers tend to be better represented. Furthermore, small enterprises and the self-employed continue to be underrepresented compared to large enterprises.

## **Education and training providers**

Although allowed by the Education Act from 1997, the Uzbek education system does not have any registered private education and training providers (EACEA, 2017, p. 5). Out of the roughly 1,550 secondary specialized and vocational educational institutions in the school year 2018/19, 92% consisted of vocational colleges and only 8% of academic lyceums (GoU, 2019b). The student population of vocational colleges is balanced, with the proportion of girls at 49.9% (GoU, 2019b).

## **3.3 Educational Finance of the VET System**

Before discussing how Uzbekistan's VET system is financed, this paragraph will take a brief look at the government's total expenditure on education, as this is exceptionally high and interesting. The GoU gives high priority to education, resulting in annual public expenditure on education of 7.4% of total GDP. Put differently, the government allocated 31.4% of its total budget to support education in 2018 (World Bank, 2018a, p. 18). In comparison, the average spending on education as a proportion of the total government budget is only around 13% for OECD countries (World Bank, 2020).

The following paragraph is based on the 2018 Education Sector Analysis from the World Bank (2018a, p. 21 et seq) and discusses the allocation of financial resources among different subsectors of the Uzbek education system for 2017. The largest portion of public spending on education is allocated to GSE with 56%, followed by VET with 20%, preschool education with 11%, and higher education with 5%. The allocation of only 5% of the education budget on higher education is one of the lowest worldwide, as

most countries spend approximately 20% of their education budget on higher education.<sup>15</sup> The remaining 8% is spent on orphanages, liberal art schools, and funding for education and medical institutions. Moreover, the relative spending on VET is substantially higher than in OECD countries, with 1.3% and 0.6%, respectively.

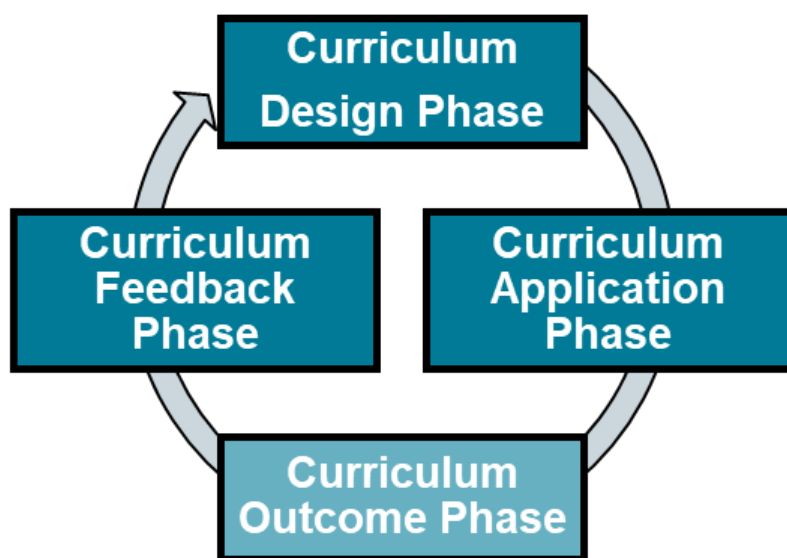
A new funding scheme for public-funded institutions was established in 1999, with the goal to improve the capacity for more efficient use of resources, self-financing, and the attraction of private and foreign investment. As of 2017, the share of private funding, primarily through tuition fees, reached around 60% of the total funding of current expenditures (EACEA, 2017, p. 4). As tuition fees are rather high, and students who do not receive a state grant rely on their parents or companies to pay their tuition fees, a new educational loans system was established in 2001 (EACEA, 2017, p. 5 et seq). This provided access to educational loans for Uzbek citizens who gained admission but could not afford it. Interest rates on such loans depend on the applicant's status, while orphans and disabled students pay no interest, and students from families classified as low income are provided with a 50% discount on loan interests.

Apart from public funding, vocational colleges generate revenue by renting out their facilities and selling goods and services. Vocational colleges are provided with equipment, training materials, and further training for teachers by the SSVE regional departments and companies partnering with these colleges (World Bank, 2018a, p. 23). This is one form of the private sector engaging in the financing of the VET system.

### 3.4 Curriculum Development

The curriculum is a central element for the functioning of a VPET system because it defines the framework and the (quality) standards for the education system. The development of a curriculum can be decomposed into a three-step process with a curriculum design, a curriculum application, and a curriculum feedback phase. This theoretical concept is called the curriculum value chain (CVC) and is depicted in Figure 8 (for more details, see Renold et al. 2015; Rageth & Renold, 2019).

Figure 8: Curriculum Value Chain



Source: Renold et al. (2015) and Rageth & Renold (2019).

<sup>15</sup> The extremely low spending on higher education has to do with the low enrolment rates of around 9% of higher education in Uzbekistan (see discussion in chapter 2).

In the curriculum design phase, the relevant actors decide on VET curriculum content and qualification standards. Therefore, the discussion in the respective sub-chapters below focuses on the degree and the amount of stakeholder participation concerning curriculum design in Uzbekistan. The curriculum application phase revolves around the implementation of the curriculum. Since learning environments differ substantially across countries, especially with respect to the prevalence of workplace learning, the curriculum application phase sub-chapter in this factbook focuses on those learning environments. Specifically, it addresses where learning takes place and whether the curriculum dictates both school and workplace learning or only one of the two. Finally, curriculum outcomes can be collected and analysed in the curriculum feedback phase. This evaluation process is important because it may render a more refined curriculum design than was possible in the first place.

### 3.4.1 Curriculum Design Phase

The design phase is crucial for the whole curriculum process. To ensure that the skills taught in the VET programs correspond to the needs of the labour market, experts from companies should be involved in defining the qualification standards and learning content of the curricula.

The curriculum design phase consists of the processes involved in creating the curriculum guiding the education process. In the Uzbek education system, the State Educational Standards (SES) define the compulsory core components of curriculum's subjects for professional and higher education, both at national and institutional levels (EACEA, 2017, p. 10). Furthermore, the SES sets the minimum requirements for each educational level and describes the main features, structure, content, and implementation of the curriculum. Institutions subject to these regulations are granted the right to deviate from the curriculum and academic timetable by up to 5% of the workload between the subjects and 10% within each subject while leaving the total workload unchanged (EACEA, 2017, p. 11).

It is the shared responsibility of the MPE and MHSSE to decide on the standards of educational achievement by grade and subject (Uzbekistan UN Mission, 2015). A clear definition for each program and subject about what students are expected to know and do enables the ministries to develop appropriate curricula and teacher guides that focus on the right skills.

Although the curriculum design phase appears to be organized in a predominantly strategic top-down approach, some reports find that current VET curricula are mainly developed by educators without much involvement in the labour market, leading to an unsatisfactory VET output and difficulties in finding relevant jobs and international workforce recognition (ETF, 2010, p. 4).

### 3.4.2 Curriculum Application Phase

The way a curriculum is implemented, especially with respect to learning environments, is important to achieve the intended learning outcome.

Under the old system, the level of organization of the educational process in professional colleges, the applied educational and regulatory documents, and the duration of training courses did not correspond to the level of complexity of the professions taught. Vocational colleges were given the pedagogical freedom to make adjustments of up to 10% in the scope of the work plans for the training offered, considering the needs of local employers. These adjustments could be made only within the category of special subjects (that is, 23% of the teaching time). Changes were not allowed in the parts of the curriculum relating to general education subjects (43.8% of the total load of 4,470 hours), which were mandatory for all students regardless of their specialization.

In 2018, the World Bank estimated that the overall physical conditions in vocational college buildings in Uzbekistan were satisfactory, but there was an obvious need for vocational colleges to improve their infrastructure, including the renovation of workshops. Workshop equipment in many vocational colleges in Uzbekistan was found to be outdated and often unsuitable for practical training (World Bank, 2017a).

Training workshops had lost their relevance and no longer corresponded to the training path pursued, being insufficiently equipped with the necessary components and spare parts. The average level of materials and technical equipment in vocational colleges was only 56% of the requirements, and 2.2% of these institutions (31 colleges) lacked training workshops. Furthermore, the organization of industrial practice did not meet the requirements of the labour market, which led to a decrease in the quality of the acquired knowledge and, accordingly, a low demand for graduates<sup>16</sup>. Consequently, it was necessary to organize additional on-the-job training after graduation.

The adoption of the relevant decrees of the president and the GoU determined the tasks of modernizing the material and technical base of professional educational institutions and the content of VET, considering the requirements of the labour market. With the 2017 introduction of the 11-year GSE through the provision of mutual integration of general education schools and professional education institutions, the way in which a curriculum was implemented changed drastically.

The current state of education in vocational schools is characterised by a traditional form of pedagogy based on classroom teaching. Students are grouped according to courses of study, and to the subject of study, in departments. The number of students in classes in academic lyceums is set at up to 26 students, and in professional colleges, the maximum is 30 students. In vocational colleges, cognitive skills are taught predominantly in the first year of the curriculum, with the second and third years of study mainly devoted to technical specialties and practical training in the workplace, while academic lyceums continue to develop cognitive skills throughout the three years of study. The training of students is carried out on the basis of the interaction of vocational education with science and industry by creating a systematic process for students of vocational colleges to undertake industrial practice within relevant enterprises.

The VET curriculum includes work experience designed to help students acquire practical skills, usually in the third year of study. To organize these internships, vocational colleges maintain relationships with leading local employers in various specialties. The percentage of hours spent in practical training is 14.4% of the total study hours. Employers are directly involved in evaluating vocational college graduates for technical proficiency both in theory and practice.

### 3.4.3 Curriculum Feedback Phase

The curriculum feedback phase deals with the questions of whether and how educational outcomes are analysed. Based on this, the curriculum could be reworked and improved.

The results of the CVC are the outcome of the processes in the curriculum design and application phase. These results can be collected, analysed, and used for updating in the curriculum feedback phase. In the case of Uzbekistan, there are several evaluation bodies in the VET system responsible for collecting data on enrolment and data on the further activity of graduates of professional colleges and academic secondary schools to feed this information back into the system for quality improvement. More specifically, the Centre for Secondary Specialised Vocational Education and Training has two departments: one responsible for managing enrolment in vocational colleges and academic secondary schools and the other for managing the employment of graduates from SSVE institutions (OECD, 2013, p. 93). These

<sup>16</sup> See the Decree of the President of Uzbekistan, No. PD-5313, dated 25 January 2018, <http://lex.uz/docs/3523198>

two departments collect data, which is then analysed by the Ministry of Labour and the Ministry of Economy.

These two ministries conduct annual labour market analyses using industry and regional economic development forecasts to adjust VET policies and curricula to meet demand (OECD, 2013, p. 94). The OECD report on vocational education and training systems in Central Asia notes that when such analyses predict a change in demand in certain occupations, vocational development is adjusted accordingly by the respective ministries. However, sophisticated data analyses as a basis for targeted and evidence-based policymaking are limited by a lack of capacity and an insufficient database (OECD, 2013, p. 21).

## 3.5 Supplying Personnel for the VET System

### 3.5.1 Requirements and Selection Process of VET Teachers

According to the Law of the Republic of Uzbekistan ‘On Education’<sup>17</sup>, a person with appropriate education, professional training, and high moral qualities has the right to engage in teaching activities. A pedagogical, engineering-pedagogical, or relevant higher education in the subject taught is further required.

The preliminary training of teaching staff is carried out in the higher education system (institutes and universities). Teacher education programs include both teaching practice and content knowledge. The duration of the Bachelor of Education Program is four years, comprising 204 weeks in total, during which students receive theoretical and practical training, the latter lasting approximately 16 weeks. In addition, prospective teachers act as observers in 20–25 classes of 45 minutes each to learn from more experienced teachers. Induction programs exist, but the focus is on following administrative procedures rather than teaching and learning (World Bank, 2018).

Students who graduate from university have the right to teach in educational institutions, including colleges and lyceums. Thus, prospective teachers need to have a higher education qualification in their specialty, at least at the bachelor's level. There are also teachers with master's and doctoral degrees. VET teaching staff are divided into two professions: teachers, who teach only theory, and masters, who conduct practical classes in seminars.

Novice pedagogues, after graduating from higher educational institutions or vocational education institutions, are assigned a qualification category (position) in the following order:

- *Teachers with secondary specialised, vocational education*: the position of a teacher with secondary specialised, vocational education;
- *Teachers with a bachelor's degree*: the position of a specialist or teacher with a higher education;
- *Specialists with a master's degree and teachers with higher education obtained before the introduction of academic degrees*: the second qualification category or the position of a senior teacher (teachers with this qualification category or position will be involved in the next certification in five years);
- *Teaching staff with a Ph.D. or Doctor of Science (D.Sc.) degree*: the highest qualification category or senior teaching position (teaching staff with this qualification category or position do not participate in certification)<sup>18</sup>.

The teacher selection and recruitment process is neither rigorous nor comprehensive enough, as it often does not include assessments of subject knowledge and teaching skills, instead relying on an evaluation

<sup>17</sup> Law of the Republic of Uzbekistan ‘On Education’.

<sup>18</sup> See the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan ‘On approval of the regulation on the procedure for attestation of pedagogical personnel of preschool, general secondary, specialised secondary, professional and out-of-school state educational institutions’, No. 392, dated 13 May 2019, paragraph 83.

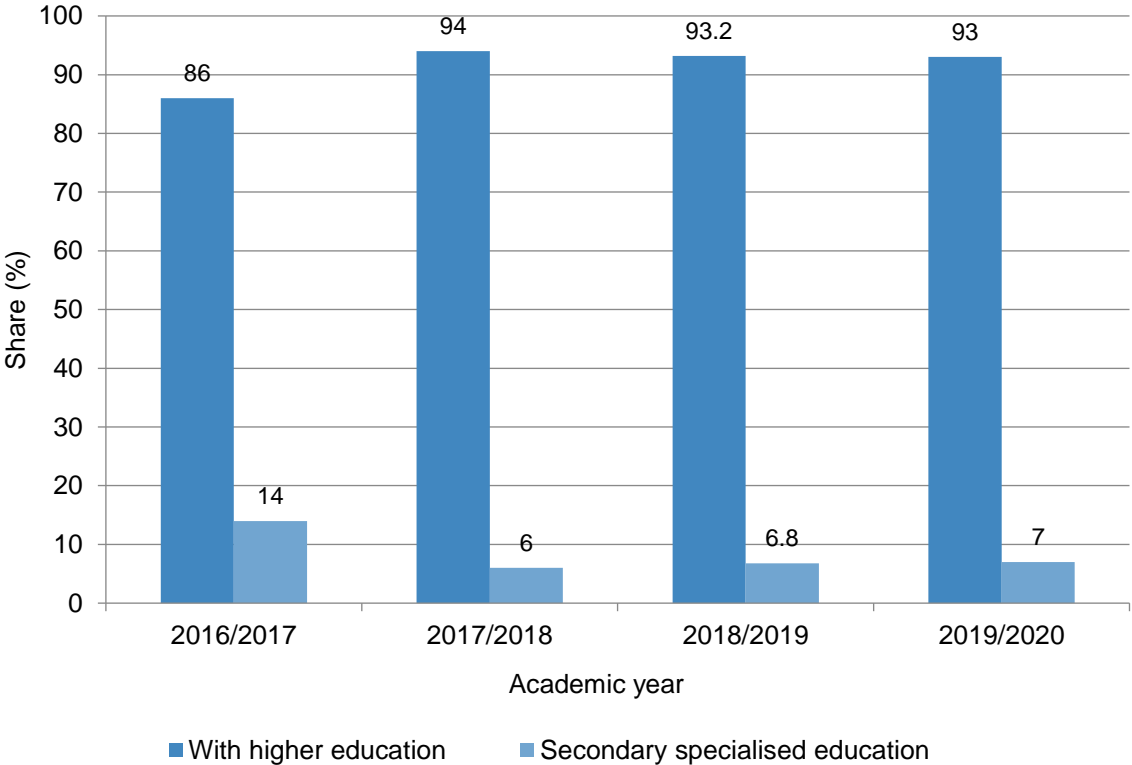
of a study portfolio and a certain amount of practical experience. To recruit a teacher, the college places an advertisement at the local job centre and/or in the local newspaper. After that, a competitive selection process is carried out based on information about the applicants' work experience, educational background, and other key qualifications. It is common practice for each professional college to set up a commission to manage the recruitment or dismissal of faculty members, including screening, interviewing, and making the final decisions.

Teachers with higher education in non-teaching disciplines must take refresher courses to teach in vocational colleges and lyceums. These courses are offered in various options. The Institute under the MHSSE and other specialized higher education institutions offer full-time retraining courses lasting up to 16 weeks or 576 hours.

### 3.5.2 Qualification Level of VET Teachers

There are five career levels for teachers responsible for industrial training (practical instruction) in the VET system in Uzbekistan, which can be subdivided into two main groups. The first group comprises teachers with only secondary specialized education diplomas. The second and largest group comprises teachers with higher education, making up about 93% of the total in 2019/20. This level also includes teachers in the senior, lead, and head teacher categories. Figure 9 shows the share of VET teachers by educational level from 2016–2019.

Figure 9: Share of VET teachers by education level



Source: State Statistical Committee of Uzbekistan.

Table 4 reports the share of VET teachers by education level across regions in the 2019/20 academic year. It shows that there are differences in the share of VET teachers with higher education across regions, ranging from 87.2% in Samarkand to about 99.2% in Kashkadarya. Nevertheless, the overall pattern suggests a relatively similar situation across regions, where the share of VET teachers with higher education is almost above 90% everywhere.

Table 4: VET teachers by education level across regions in the 2019/20 academic year

Regions/Viloyats	Share of teachers with higher education (%)	Share of teachers with secondary specialized education (%)
<b>Republic of Uzbekistan</b>	<b>92.5</b>	<b>7.5</b>
Republic of Karakalpakstan	95.5	4.5
<b>Regions/Viloyats</b>		
Andizhan	92.1	7.9
Bukhara	93.4	6.6
Dzizzakh	92.3	7.7
Kashkadarya	99.2	0.8
Navoi	94.7	5.3
Namangan	90.5	9.5
Samarkand	87.2	12.8
Surkhandarya	92.8	7.2
Sirdarya	88.6	11.4
Tashkent	88.0	12
Fergana	92.6	7.4
Khorezm	98.2	1.8
Tashkent city	97.0	3.0

Source: The State Statistics Committee of Uzbekistan.

### 3.5.3 Employment Status and Career Path of VET Teachers

As previously discussed, in connection with the transition from the 2017/18 academic year to the 11-year compulsory GSE system and the beginning of the reform of the VET system, the number of teachers and masters in vocational educational institutions has sharply decreased. According to the MHSSE, the total number of instructors in industrial training (including part-time workers) amounted to 32,300 people in July 2019. However, by the beginning of the 2019/20 academic year, this number decreased by 46% to just 18,100.

Compared to the 2016/17 academic year, currently, about 90% of college teachers have moved to schools, academic lyceums, and other organizations due to the reforms and suspension of student admissions to colleges from the 2017/18 academic year. There is a high turnover among the teaching staff due to the reform of vocational education. The demand for the best teaching staff remains high, especially at the regional level.

Almost 90% of the teaching staff are full-time, and over 50% are women. VET teachers in Uzbekistan are relatively young – more than 50% are under 45 years old – while the average amount of teaching experience held is 12 years, and the overall average work experience is 15 years. Almost 80% of teachers teach in Uzbek, and only 3% teach in Russian (World Bank, 2018).

In the VET system, the employment of teachers was connected directly with the local governing bodies – the khokimiyat – which determined the enrolment quota for students regarding the economic development of the area. This quota determined the expenditure of each college, including the cost of conducting practical training. Professional colleges recruit and terminate teachers following the applicable laws. For some technical professions, apprenticeship masters work for companies when they complete their teaching duties.



Teachers' career development depends on many factors, including academic background and certification results. Therefore, their promotions hinge on the results of certification and the fulfilment of other requirements, such as possessing a master's degree (mandatory for the senior teacher position) and work experience, which is confirmed or increased based on the results of theoretical tests and the presentation of a portfolio every three to five years.

The career path of teachers is determined by the results of their certification. This procedure is conducted annually from March–June, and teachers must renew their certification every five years. Although, upon written application, they can undergo the process ahead of schedule. According to the certification results, teachers are assigned the second or first and highest qualification categories, and a certificate is issued assigning the appropriate qualification.

### 3.5.4 Quality of VET Teachers

The assessment of the activities of teachers and masters in the VET system is carried out to stimulate improvements in teaching and pedagogical skills, create opportunities for earning higher wages, and support the learning of foreign languages. In addition, the prevalence of computer technologies and information and communication technologies, including the Internet, make it mandatory to have practical skills in using the global information network<sup>19</sup>.

Based on the assessment of the teacher's performance and the attestation process results, they can be downgraded to a lower level in their career pathway if they do not pass the certification. Once they reach the lowest level, they may eventually be dismissed from the profession.

Certification is done in two stages. In the first stage, the results of the qualification test in the certified subject, as well as teaching skills and work efficiency, are studied by an expert group, and appropriate recommendations are made. In the second stage, the certification commissions analyse the results of the first stage, study the sets of documents (portfolios) collected in the certification process, and decide whether to leave the teacher in their current qualification category (position) or transfer them to another one. However, because assessments are conducted every five years, ineffective teachers can remain in the classroom, affecting their students' performance for several years before specific action is taken.

Advanced training and retraining of teaching staff in the vocational education system are carried out under the leadership of the Institute of Pedagogical Innovations, Retraining and Advanced Training of Management and Pedagogical Personnel of Professional Education under the Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan. Refresher courses for VET teachers are held in selected higher education institutions. The institution proposes the candidacy of a teacher for the advanced training course. The responsible territorial vocational education department then determines the training needs and makes the final decision regarding the list of students for the upcoming advanced training course.

Courses are offered in various formats, including face-to-face training, a combination of face-to-face sessions and individual or practical college assignments, mentor-learner arrangements, and hands-on internships with firms. The curriculum of refresher courses is updated every three to five years, as mandated by the MHSSE. Further education courses cover general knowledge, knowledge and skills related to the teaching profession in general, and knowledge and skills related to relevant subject areas and topics.

<sup>19</sup> See the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan, 'On approval of the regulation on the procedure for attestation of pedagogical personnel of preschool, general secondary, specialised secondary, professional and out-of-school state educational institutions', No. 392, dated 13 May 2019.

### 3.5.5 Attracting and Retaining VET Teachers

In Uzbekistan, teachers have a low status and are poorly paid. Therefore, vocational colleges face serious difficulties in attracting qualified specialists from their respective industries.

Among the main challenges facing the VET system, UNICEF points to the training and recruitment of qualified personnel capable of preparing students for the demands of the labour market (UNICEF, 2019). In practical terms, attracting teachers with a certain specialty is not being achieved in the regions, even though it is precisely in the regions where new jobs are being created and creative personnel are needed.

The qualification requirements for teaching work often fail to attract potentially talented teachers because they have been developed based on old principles. For example, the position and status of a teacher are firmly tied to the acquisition of a scientific degree, ignoring more flexible and realistic indicators and criteria. In addition, attracting and retaining teachers is the task and prerogative of the educational institution's leadership. However, students themselves could be included in this process, such as through highlighting the value of a particular teacher due to their high level of authority among students and professionals.

With the introduction of reforms in VET provision to be developed following the adoption of the relevant decree of the head of state<sup>20</sup>, perhaps new, effective mechanisms for attracting, motivating, and remunerating teachers will be introduced since the attractiveness of VET will, in general, depend on them.

## 4. Major Reforms in the Past and Challenges for the Future

### 4.1 Major Reforms

After gaining independence from the Soviet Union in 1997, Uzbekistan carried out fundamental, structural, and substantive reforms that encompassed all levels of education to begin the transition toward a system that would be more responsive to a demand-driven economy (Uzbekistan UN Mission, 2015). Although there has been progress in the educational system reform, the process is far from finished, the quality of education remains a major concern, and training programs are not coordinated (ETF, 2010, p. 1).

Article 41 of the Uzbek Constitution states that everyone shall have the right to education, that the state guarantees free general education, and that the schools are supervised by the government. Apart from the constitution, the legal basis for the national policy in the field of education includes (i) the Education Act, (ii) the National Program for Personnel Training, (iii) the National Program for School Education Development, (iv) Decrees and Resolutions of the President, and (v) Resolutions of the Cabinet of Ministers (EACEA, 2017, p. 1). The cornerstones of the Uzbek educational policy are the National Program for Personnel Training (1997–2009) and the National Program on School Education Development (2004–2009), which cover all subsectors of the education system, including all levels from preschool to

<sup>20</sup> Decree of the President of the Republic of Uzbekistan 'On additional measures to further improve the vocational education system', No. PD-5812, dated 6 September 2019, <https://lex.uz/ru/docs/4500929>

higher education (ETF, 2010, p. 3). The following list highlights the major reforms with a connection to the VET system.

**1. Expanding GSE from nine to 11 years of schooling**

Students in grades 10 and 11, by default, receive additional vocational training under the new reform to ensure that they gain exposure to practical training and skills. Students can still choose to attend academic lyceums instead of GSE schools for grades 10 and 11, with the caveat that the study program for academic lyceums has been condensed to two years (World Bank, 2018a, p. 11). These changes are based on Presidential Decree УП-5313 from early 2018.

**2. Aligning SSVE more closely with the labour market's interests**

Vocational colleges' offer is newly optimized based on national and regional economic development priorities, labour market forecasts, and technological development and trends. This measure follows the Presidential Decree УП-3504 on "Measures to Comprehensively Improve the System of General Secondary, Secondary Specialized and Vocational Education" from 2018 (World Bank, 2018a, p. 12).

**3. Raise teaching quality in SSVE**

The GoU launched a new program in 2001 called *Program for the Preparation, Re-orientation, and Further Training of Qualified Pedagogical and Technical-Pedagogical Staff of the System of Secondary Specialised Professional Education* to increase the level of qualification and professionalism of the teachers working in SSVE. The goal was to increase teaching quality through close cooperation with the industry and distance education systems (GoU, 2019a, p. 14). A similar program was established in 2012 with the *Presidential Decree on Measures for the Further Development of the System of Training and Supply of Qualified Staff to Secondary Specialised Professional Education Institutions* to increase the level of qualification among school directors and teachers at academic lyceums and vocational colleges (GoU, 2019a, p. 15).

**4. Alignment of vocational colleges with the needs of specific industries**

With the approval of Resolution 961 from the Cabinet of Ministers from 2017, the administration of vocational colleges was transferred from the MHSSE to other ministries, public agencies, and businesses operating in the same sector of the vocational schools' offered programs. Subordinating vocational colleges to companies in the same sector was expected to improve the alignment of vocational colleges with the skill needs of specific industries (GoU, 2019a, p. 22 et seq).

Furthermore, it is worth mentioning that Uzbekistan has implemented some policies to improve teaching and learning methods in VET. The GoU, together with donor organizations and the relevant ministries, is currently taking the necessary measures to improve teaching and learning methods in the VET system. In particular, as part of the implementation of the "Plan of the Education Sector of Uzbekistan for 2019–2023", the use of educational resources, including the introduction of information and communication technologies, to support pedagogy in professional education is envisaged. Massive online open courses and virtual classrooms will be made available in educational institutions through the use of ICTs to improve the quality of education in general and VET and higher education provision in particular.

Successfully piloted in colleges and supported by the British Council, the Competence-Based Teaching initiative focused on the tourism sector<sup>21</sup>. Uzbekistan plans to implement the Competence-Based Teaching initiative in colleges from pilot sectors, such as construction, agriculture, textiles, and information technology. This project provides for the professional development of teachers within the framework of the competency-based curriculum. Following the "Concept for the promotion of lifelong learning in Uzbekistan", the target for further policy and strategy formulation is the "Development of modular VET

<sup>21</sup> British Council: Employment Skills Development Project.

curricula”, taking a competency-based approach and using recognized tools and methods capable of transferring labour market requirements to learning programs<sup>22</sup>.

Finally, in line with the “Education Sector Plan (ESP) of Uzbekistan for 2019–2023”<sup>23</sup> and the “Concept for the development of higher education up to 2030”, the issue of integrating education into production is currently under revision. This implies the inclusion of training in the workplace, the development of private institutions for training and retraining personnel using advanced methods, and the introduction of mechanisms from developed countries with the involvement of individual experts and donors. Specifically, the Uzbekistan ESP 2019–2023 includes “Strategic area 4”, according to which, over the next years, vocational and higher education institutions will be modernized and equipped with modern teaching aids. Concretely, to ensure its further strengthening and effective use, the priority task of the new VET training system is the formation of a modern material and technical base for vocational colleges, including highly effective teaching and laboratory equipment, computer technology, and innovative technology parks<sup>24</sup>.

## 4.2 Major Challenges

The Uzbek ESP 2019–2023 elaborates a framework with strategic objectives for each education sub-sector addressing their unique challenges. For the VET and higher education sector, three main challenges and the respective policy goals are stated (GoU, 2019a, p. 111 et seq):

### 1. Enhance access and participation

The GoU recognized limited access to and participation of VET and higher education students and plans to expand the seats in the VET pathway, establish new courses, and introduce new modes of course delivery. New, more flexible modes of service delivery include evening classes and flexible timeframes for coursework completion.

### 2. Improve the quality of the learning environment

The ESP plans to expand and improve the VET infrastructure and facilities to align them to the state standards in terms of quality and safety. This is based on the strong evidence presented by recent studies in the fields of educational psychology, sociology, and economics showing that education infrastructure quality deeply affects student outcomes (World Bank, 2018a, p. 49). The improvement of basic infrastructure, such as access to water, sanitation, and hygiene, in Uzbek schools of all levels remains a major challenge (World Bank, 2018a, p. 51).

### 3. Increase quality and relevance

There is a significant mismatch between what the Uzbek education system offers and what companies need, especially in vocational training. The skills gap leads to an overdependence on imported labour and hampers growth and development (OECD, 2013, P. 24). Therefore, the ESP defines the skills gap and the quality and relevance of the VET curriculum as a major challenge and aims to improve it by developing and endorsing a National Qualification Framework and improving the National Occupational Classification for VET. These documents are used to revise and enhance VET curricula. In addition to those changes, the ESP gives more weight to practical and industry-specific skills and knowledge acquisition in the curricula.

<sup>22</sup> See the draft ‘Concept for the promotion of lifelong learning in Uzbekistan’, Tashkent, 2018, [http://www.dvv-international-central-asia.org/fileadmin/files/central-asia/documents/Publications\\_and\\_other\\_media/Publications/Adult\\_Education/LLL-Promotion\\_Concept-UZB\\_final\\_ru.pdf](http://www.dvv-international-central-asia.org/fileadmin/files/central-asia/documents/Publications_and_other_media/Publications/Adult_Education/LLL-Promotion_Concept-UZB_final_ru.pdf)

<sup>23</sup> Education Sector Plan 2019–2023, Uzbekistan, <https://www.globalpartnership.org/content/education-sector-plan-2019-2023-uzbekistan>

<sup>24</sup> Decree of the President of the Republic of Uzbekistan, PD-5313, dated 25 January 2018, <http://lex.uz/docs/3523198>

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