

# TORINO PROCESS 2018–2020 KAZAKHSTAN NATIONAL REPORT

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Republic of Kazakhstan - National Torino Process report (NRF)

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# ACRONYMS

<b>JSC «NCPD» Orleu»</b>	Joint stock company «National Center for professional development «Orleu»
<b>JSC «CHRD»</b>	Joint stock company «Center of Human Resource Development »
<b>AIC</b>	Agro-industrial complex
<b>CC</b>	Core competency
<b>FTVET</b>	Free Technical and Vocational Education and Training
<b>WB</b>	World Bank
<b>GDP</b>	Gross domestic product
<b>GRP</b>	Gross regional product
<b>HEI</b>	Higher education institution
<b>SCES</b>	State compulsory educational standards
<b>State order</b>	State educational order
<b>SPIID</b>	State Programme for Industrial and Innovation Development
<b>SPESD</b>	State program of education and science development in the Republic of Kazakhstan
<b>PPP</b>	Public private partnership
<b>DT</b>	Dual training
<b>EQF</b>	European Qualifications Framework
<b>EU</b>	European Union
<b>ETF</b>	European Training Foundation
<b>FE</b>	Final examination
<b>IAC</b>	Information Analysis Center
<b>ETS</b>	Engineering and teaching staff
<b>ICP</b>	Individual curriculum plan
<b>SC MNE</b>	Statistics Committee of Ministry of National Economy of the Republic of Kazakhstan
<b>KC</b>	Key competencies
<b>RT</b>	Refresher Training
<b>CCES</b>	Committee for the Control of Education and Science
<b>Masters of IT</b>	Masters of Industrial Training
<b>LB</b>	Local budget

<b>LEB</b>	Local executive bodies
<b>MES</b>	Ministry of Education and Science of the Republic of Kazakhstan
<b>SMEs</b>	Small and medium-sized enterprises
<b>MTB</b>	Material and technical base
<b>MTF</b>	Material and technical foundation
<b>MNE</b>	Ministry of National Economy of the Republic of Kazakhstan
<b>MLSP</b>	Ministry of Labor and Social protection of population of the Republic of Kazakhstan
<b>ISCED</b>	International Standard Classification of Education
<b>NC JSC»Holding «Kasipkor»</b>	Non-commercial Joint Stock Company «Holding «Kasipkor»
<b>NLA</b>	Normative legal acts
<b>NCE»Atameken»</b>	National Chamber of Entrepreneurs «Атамекен»
<b>NEDB</b>	National Education Database
<b>NQF</b>	National Qualifications Framework
<b>NQS</b>	National Qualifications System
<b>NSDC</b>	National Skills Development Centre
<b>n.a.</b>	Not available
<b>UNO</b>	United Nations Organization
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>EP</b>	Educational programmes
<b>SEN</b>	Special Educational Needs
<b>DPC</b>	Deprived of parental care
<b>WT</b>	Workplace training
<b>APC</b>	Assessment of Professional Competence
<b>PMPC</b>	Psychological Medical Pedagogical Consultations
<b>DGRK</b>	Decree of the Government of the Republic of Kazakhstan
<b>PC</b>	Professional competence
<b>BT</b>	Board of Trustees
<b>Profstandards</b>	Professional standards
<b>SB</b>	State budget
<b>RSMC</b>	Republican Scientific and Methodological Center

<b>RK</b>	The Republic of Kazakhstan
<b>TVET</b>	Technical and vocational education institutions
<b>TP</b>	Torino process
<b>MC</b>	Model Curriculum
<b>DCESP</b>	Department for coordination of employment and social programs
<b>ED</b>	Education Department
<b>CAEP</b>	Central Asia Education Platform
<b>CA</b>	Central Asia
<b>YTS</b>	Young Teacher School
<b>GIZ</b>	German Society for International Cooperation
<b>ERG</b>	Eurasian Group
<b>NEET</b>	Unemployed and uneducated youth (not in education, employment and training)
<b>PISA</b>	International Programme for Student Assessment (Programme for International Student Assessment)
<b>TIMSS</b>	International assessment of the school mathematical and science knowledge (Trends in Mathematics and Science Study)
<b>WS</b>	Worldskills movement

## BUILDING BLOCK A: COUNTRY AND VET OVERVIEW

### A.1: Country background

#### A.1.1 Introduction

In early 2018 the first President of the Republic of Kazakhstan (RK) N. Nazarbayev in his Message outlined new opportunities for development in the conditions of the Fourth Industrial Revolution.

Total population of RK as of December 1, 2018 is 18608 thousand people, proportion of economically active population in 2018 is 71%.

According to the Statistics Committee of the Ministry of National Economy of the RK (SC MNE), the volume of gross domestic product (GDP) produced for 2018 was 58.8 trillion tenge, increasing in real terms by 4.1%. GDP growth for 2018 was provided by positive dynamics in all sectors of the economy. The largest contribution to the growth of the economy was the mining industry (growth of production by 4.6%), manufacturing industry (by 4.0%), wholesale and retail trade (by 7.6%), transport and storage (by 4.6%), real estate operations (by 2.7%).

In December 2018 the number of employed population increased by 2% (compared to December 2017) to 8704 thousand people (more than 95% of the economically active population). The largest number of employees is employed in trade (15.9% of the total number of employees), agriculture (14.1%), education (12.6%), industry (12.7%) (Source: SC MNE).

According to the SC MNE for IV quarter of 2018, the unemployment rate was 4.8% and the youth unemployment rate was 3.9%. According to the SC MNE proportion of NEET youth in 2017 among women was 11.5%, among men - 5.9%. The share of citizen with a substandard income in 2016 was 3.0%, and in 2018 it increased by 1.2% and amounted to 4.2%.

The first five-year program of industrial and innovative development, which accelerated the diversification of the economy, was completed, and the second five-year plan is being implemented. In six years the energy intensity of the economy reduced by almost 13.5%. The State program for the development of agro-industrial complex (AIC) for 2017-2021, aimed at increasing competitiveness of agro-industrial sector, is being implemented. In the agro-industrial complex within the framework of the «Agrobusiness» program, the subsidizing of the agro-industrial entities has been doubled. The measures adopted allowed to ensure growth of labor productivity in the manufacturing industry by 17.6% in the AIC by half.

One of the key areas of the Strategic plan until 2020 were investment in education, science and health.

During the period from the previous round of the TRP in Kazakhstan, since 2017 the project «Free Technical and Vocational Education Institutions for All» (FTVET) began, according to which training in the first work specialty is provided free of charge. This project focuses on unemployed and self-employed young people, as well as people of working age who do not have a professional education. During the two years of this project, the mechanisms for obtaining free technical and professional education for workers' qualifications, including through course training, have been expanded.

Kazakhstan is modernizing the TVET system. Students of colleges were given the opportunity to assign several applied qualifications within the framework of one specialty.

Current requirements to the competence of employees, conditions and quality of work are stated by employers in their professional standards. Professional standards (profstandards) are the basis for hiring and certification of a specialist. They are the basis for creating Educational Programs. If until

now the education system itself has formed the content of the training programs, now this content should be ordered by the employer through the professional standards. On the basis of professional standards, new educational programs are developed on the basis of a modular and competent approach. Development of Educational Programs (EP) for colleges is carried out by holding «Kasipkor» with the involvement of Kazakhstan and international partners.

Currently, on the basis of the modular and competent approach, holding «Kasipkor» developed 74 new educational programs in the priority areas of the State Program for Industrial and Innovation Development of the RK (SPIID), as well as in the period 2016-2018 updated 246 standard curricula and programs in the specialties of technical and professional education. New educational programs began to be introduced in colleges since 2013. Between 2014 and 2018 holding «Kasipkor» developed 48 programs for 134 qualifications.

Since 2015 Kazakhstan annually holds the regional and national WorldSkills championship. National team of Kazakhstan took part in the 44th World Championship Worldskills Competition in Abu Dhabi in 2017 and in 2018 in the VI European EuroSkills'18 Championship.

Holding «Kasipkor» developed 15 TC of applied bachelor's degree. In 2018 on the initiative of ED of regions of the MES, 46 pilot educational organizations were identified for the implementation of applied bachelor's and credit training technology.

In 2016 the World Bank (WB) and the Ministry of Health and Social Development of the RK (MHSD) officially launched a Project to develop labor skills and stimulate jobs. In 2018 within the framework of this project, development of educational TVET programs based on professional standards was started. These programs in 10 specialties and 30 skills of TVET are developed in such areas as education, radio electronics and communications, telecommunications, information technology, construction, chemical technology and production, energy. Pilot implementation of EP has been started for the students of 1 college courses from the 2018-2019 academic years.

## A.2: Overview of Vocational Education and Training

### A.2.1 Overview of VET: set-up and regulatory framework

To colleges and higher colleges students can be enrolled on the basis of the main secondary (9 grades), general secondary (11 grades) and on the basis of the TVET.

TVET educational institutions are divided into public and private by the type of ownership. Educational organizations that have a license to engage in EP TVET, issue documents on the formation of the national type to the students, who have passed the final certification,.

TVET is aimed at training personnel in the mass professions of technical and service labor, qualified workers, middle-level professionals and applied bachelors.

Depending on program, training lasts from one to four years. Persons enrolled in colleges on the basis of basic general education (9 grades) and those studying in 10-11 grades of general education schools correspond to the 3rd level of the International Standard Classification of Education (ISCED). Persons who have entered colleges on the basis of general secondary education and who are studying for 10 months or 1 year and 10 months, correspond to the 4th level of ISCED. EP of post-secondary education is aimed at the preparation of applied bachelors from among citizens who have secondary education (general secondary or technical and professional). Persons studying under the program of applied bachelor's degree correspond to the 5th level of ISCED (Table 1).

**Table 1. Correspondence of educational levels of Kazakhstan to the levels of ISCED**

No	ISCED level	Educational levels of Kazakhstan	age
1	ISCED 3	General secondary education (10- 11 grades)	15-16 years
		TVET (2-4 years)	15, 16,17,18 years
2	ISCED 4	TVET (10 months, 1 year и 10 months, 2 years and 10 months)	Over 18 years
3	ISCED 5	Bachelor of Applied Science (1-3 years)	Over 18 years

Source: ISCED

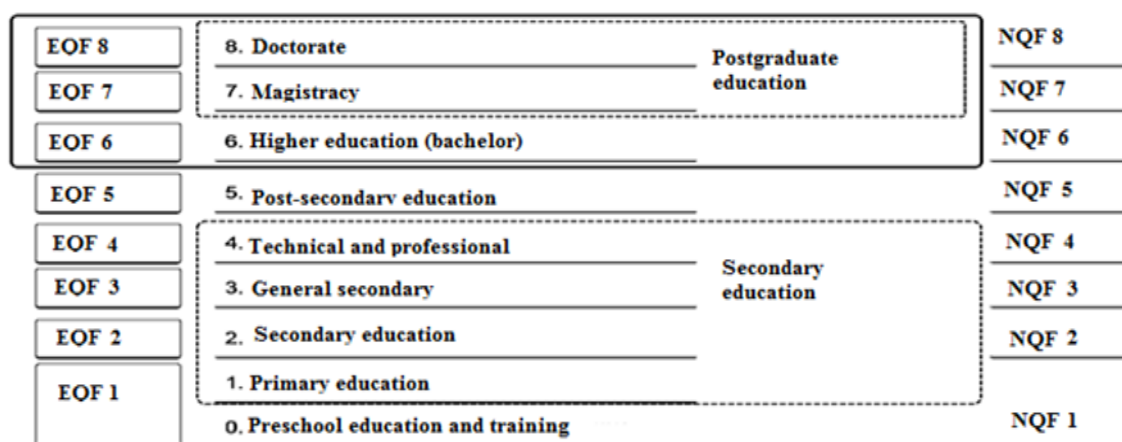
Students are trained in colleges in profiles, specialties and qualifications according to the classifier of specialties and qualifications of the TVET. Classifier is used for indexing of the TVET documents and is compiled in accordance with the codes of the ISCED and the State Classifier of specialties of the RK (Classifier of specialties). Currently, training is carried out in 213 specialties and 693 qualifications.

In RK formation of the National Qualifications System (NQS) continues, as a mechanism for regulating the demand and supply of specialists to the labor market. Professional standards are developed within the framework of the NQS, on the basis of which EP in TVET system are updated.

Kazakhstan adopted the National qualifications framework (NQF) and it was approved by the protocol from March 16, 2016 by the Republican Commission on Social Partnership and Regulation of Social and Labor Relations.

NQF includes a description of eight qualification levels in three broad indicators: knowledge, skills, personal and professional competencies (PC). NQF is comparable to the European qualifications framework (EQF) .TVET corresponds to the 4th level of NQF and EQF, post-secondary education (applied bachelor's degree) – to the 5th level of NQF and EQF (Figure 1).

Figure 1. Compliance of National and European qualifications framework



**Table 2. Legislative framework for policy measures in TVET field**

No	Policy documents
	Law of the RK «On Education» (with amendments and additions as of April 19, 2019)
1.	State Program for Development of Education and Science of the RK for 2016-2019, approved by the Decree of the Government of the RK from July 24, 2018 № 460
2.	Labor Code of the RK, with amendments and additions as of 01.01.2019
3.	State Program of Industrial and Innovative Development of the RK for 2015-2019, approved by the Decree of the President of the RK of August 1, 2014 № 874
4.	Strategic Development Plan of the RK until 2025, approved by the Decree of the President of the RK of February 15, 2018 № 636
5.	Strategy «Kazakhstan-2050»: New political course of the established state Address of the President of the RK - Leader of the Nation N.A. Nazarbayev to the people of Kazakhstan, Astana, December 14, 2012



6.	National classifier of the RK, approved and implemented by the Order of the Committee for Technical Regulation and Metrology of the Ministry for Investment and Development of the RK of May 11, 2017 № 130-od
7.	Program for the development of productive employment and mass entrepreneurship for 2017-2021 «Enbek», approved by the Decree of the Government of the RK of November 13, 2018 № 746
8.	Road map for holding the Year of Youth was approved by the Decree of the Government of the RK for January 30, 2019 № 27
9.	Roadmap of Trilingual Education Development for 2015-2020
10.	State program «Digital Kazakhstan» was approved by the decree of the Government of the RK № 827 dated from 12.12.2017
11.	State Program of Business Support and Development «Road Map of Business-2020» was approved by the Decree of the Government of the RK from August 25 №522
12.	Strategic Development Plan of MES from December 08, 2017, № 610

Source: Legal information system of normative legal acts of the RK «Adilet»

### A.2.2. Institutional and governance arrangements

State policy in the field of education is established by the President and the Government of the RK. At the national level, the MES is responsible for the national policy and at the regional level by Department of Education (DE), which is responsible for the conformity of the TVET system to state requirements and the needs of the social and economic development of the region.

Thus, TVET management system includes:

- at national level, the Department of Technical and Vocational Education of the MES (DTVET). DTVET has five offices: Content and Methodology Management, Planning and Development Management, Partnership and International Projects Management, Statistics and Analysis Management, Monitoring and Coordination Management. The DTVET of MES is responsible for the formation and implementation of the state policy of TVET: Regulatory legal acts (RLA) and regulation, system of quality assurance of training, stimulation of trainers and masters of professional education in TVET, equal access to the TVET and strategic planning and forecasting of demand and supply.
- at the regional level - departments of TVET as the part of Education Department;
- at local level - the Board of Trustees and administrative and management staff of 821 educational institutions.

The following structure of TVET management system «Government - DTVET - DE - providers of educational services (colleges)» has been built.

Under the Law «On Education» implementation of state policy in the field of education is carried out by the Government of the RK, central executive bodies of the RK in the field of education, local executive bodies and the DE.

Guidance and cross-sectoral coordination in the field of education is carried out by the Central Executive Body of the RK, which is the authorized body in the field of education-MES. The MES is the central executive body within The Government of the RK, carrying out the management, as well as within the limits provided by the legislation.

Government of the RK ensures the participation of social partners in the solution of problems of professional education and approves the state educational order for training of personnel from TVET in educational organizations financed from the republican budget.

Law «On Education» stipulates that «the authorized body in the field of education and local executive bodies (LEB) implement a unified state policy in the field of education, carry out inter-sectoral coordination, place a state educational order for training personnel from the TVET among the organizations of TVET».

MES manages the quality of education, provides methodical and methodological support for the quality of provided educational services, develops and approves state compulsory standards of all levels of education (SCSE), develops and approves MC, approves the qualifications required for educational activities, and lists of documents verifying their conformity.

Local executive bodies (LEB) implement the state policy in the field of education, provide education, create, reorganize and eliminate state colleges in accordance with the procedure established by the legislation of the RK on alignment with ED, carry out material and technical foundation (MTF) of state colleges that implement TVET educational programs.

### A.2.3. Basic statistics on VET

In 2018 training of qualified specialists with TVET in the republic was carried out by 821 TVET organizations, 479 (58%) - state, 342 (42%) - private, total number of students was 489.8 thousand people. 647 (79%) of the total number of colleges are in the city, 174 (21%) are in rural areas (Table 3).

The number of students decreased by 43 thousand people in 5 years (8%), in urban colleges the number of students decreased by 43.2 thousand people (9%), and in rural it increased by 1%. If one considers the dynamics of students over 5 years in gender aspect, one can conclude that there is no significant dynamics over 5 years, male students in 2018 are 53% (in 2014-52%), and female students are 47% (in 2014-48%). Annually, female students enter colleges by 6% less. Whether this is due to the lack of prestige of TVET for young women or their goal of obtaining higher education remains unclear.

**Table 3: Number of TVET organizations by type of property and administrative status of the region**

TVET organizations	2016	2017	2018
Total	817	824	821
City	648	649	647
Village	169	175	174
State	473	477	479
Private	344	347	342

Source: National Education Database (NEDB)

51395 people over 24 years of age are enrolled in colleges, 10% of the total contingent (Source: SC MNE). Presence of this group of students indicates that TVET is a factor of successful social adaptation not only of young people, but also of adults.

In 2018, training in the TVET system was continued on 15 profiles of the education of the classifier of professions and TVET specialties. The highest percentage of the students graduated with a degree in «Medicine, pharmaceuticals» (79.2 thousand people - 16.2%), «Education» (74.9 thousand people - 15.3%) and «Service, economy and management» (60.9 thousand people - 12.4%) (Table 4).

**Table 4. Number of students by profile**

No	Profile name	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
1	0100000 Education	15,5%	15,9%	15,6%	15,6%	15,3%
2	0200000 Law	5,3%	4,6%	4,3%	4,1%	3,8%

3	0300000 Medicine, Pharmaceuticals	13,7%	14,8%	15,3%	16,0%	16,2%
4	0400000 Art and Culture	2,6%	2,7%	2,8%	2,8%	3,0%
5	0500000 Service, Economics, Management	14,1%	13,5%	13,3%	12,7%	12,4%
6	0600000 Metrology, standardization and certification	0,3%	0,2%	0,2%	0,2%	0,2%
7	0700000 Geology, mining industry and mining	1,7%	1,6%	1,6%	1,6%	1,6%
8	0800000 Oil and gas production	2,9%	2,9%	2,6%	2,3%	1,9%
9	0900000 Energetics. Power industry	4,1%	4,1%	4,1%	4,2%	4,1%
10	1000000 Metallurgy and machine building	1,1%	1,0%	1,0%	1,1%	1,2%
11	1100000 Transport (by industry)	5,3%	5,5%	5,7%	5,8%	5,9%
12	1200000 Production, installation, operation and repair (by industry). Transport operations	11,5%	11,6%	11,6%	12,0%	12,5%
13	1300000 Communications, telecommunications and information technology. Electronics	10,3%	9,7%	9,4%	8,8%	8,5%
14	1400000 Construction and utilities	5,3%	5,3%	5,7%	5,9%	5,9%
15	1500000 Agriculture, veterinary and ecology	6,5%	6,6%	6,7%	7,1%	7,5%

Source: NEDB

More than 50% of college students are enrolled at the expense of budget resources. Despite a 7% decline in the proportion of students from 2014 to 2018, the proportion of students receiving a State education grant increased by 10.3% during the same period. This is due to the implementation of the project «FTVET» since 2017 (Diagram 1).

**Figure 1. Proportion of students on state order**



Source: NEDB

Material and technical base (MTB) and qualified engineering and teaching staff (ETS) are of paramount importance for the formation of PC of the TVET students, which is demanded by the employer.

Between 2014 and 2018, the number of TVET organizations practically remained unchanged (increased by 1), but during the same period the proportion of teachers decreased by 2.5%, and the proportion of masters of PT increased by 6.6%. The increase in the proportion of masters of PT is connected with the implementation of the project «FTVET» (Table 5).

**Table 5. Number of teachers and masters of vocational training**

Total	2014	2015	2016	2017	2018
Teachers	33 361	32 580	32 484	32 961	32 551
Masters V/T	5 634	5 537	5 643	5 978	6 005

Source: SC MNE

## A.2.4 Vision for VET and major reform undertakings

In December 2012, in the Message of the First President, the people of the country were presented the Strategy for the Development of the RK until 2050. It envisages implementation of seven long-term priorities, among which is the priority «Knowledge and professional skills are key landmarks of the modern education, training and retraining system».

Strategic Development Plan of the RK until 2025 is a document of the state planning system for the medium term period and is developed in the implementation of the long-term Development strategy of Kazakhstan until 2050. Main goal until 2025 is to achieve a qualitative and sustainable economic recovery, leading to better human welfare at the OECD level.

Qualitative growth of the economy will be based on increasing competitiveness of business and human capital, technological modernization, improvement of the institutional environment. Sustainable Development Goals of the United Nations Organization (UNO) will be an important guide.

In order to implement 77 steps «Training of qualified personnel in ten leading colleges and ten universities for six key sectors of the economy with the subsequent dissemination of experience in other educational institutions of the country» of the National Plan «100 specific steps» and according to the approved Plan for the development of basic universities and colleges to provide qualified specialists within the framework of projects of the State program of industrial and innovative development of the RK for 2015-2019 is carried out training of personnel in basic universities and 10 colleges.

Most developed and developing countries have relied on human capital development. Investment in education worldwide is growing. For 12 months of 2018, investment in education in Kazakhstan fell by 22.7% year-on-year to 204.9 billion tg. In 2018, during the same period, investments reached 2 billion tg. with an annual growth of 25.7% (Source: [Finprom.kz https://kursiv.kz/news/obrasovanie/2019-03/v-2018](https://kursiv.kz/news/obrasovanie/2019-03/v-2018)).

Proportion of the educated population by 2050 should grow from the current 66% to 77%, while the number of people with higher education will almost double.

In the Strategic plan for the development of the RK until 2025, reform № 1 indicates the human capital, which has the required skills of the XXI century. In this plan, the key directions of TVET development are the development of dual education (DE), TVET digitization, EP updating, profiling of colleges.

Principal aim of the training of personnel are determined by the State Program of Development of Education and Science for 2016-2019 (SPDES), the Program of productive Employment and Mass Entrepreneurship for 2017-2021 «Enbek» (Program «Enbek»).

Cardinal changes are envisaged at the legislative level. More than 20 normative and legal acts were updated within the framework of the implementation of the Law «On Education».

In the Rules of placing of the state educational order (State order), changes were made in the part of strengthening the requirements for educational organizations when placing a state order, to the qualitative composition of the competitive Commission.

In order to ensure accessibility of the TVET system for persons with special educational needs (SEN), the Rules regarding admission are supplemented with an educational certificate issued to persons with SEN (with mild and moderate mental retardation).

In addition, changes have been made in the inclusion of a special examination for persons entering the pedagogical specialties. A special examination is aimed at determining the tendency toward pedagogical activity among the applicants.

Since 2017, everyone has the opportunity to receive free TVET for work qualifications. Since 2018, TVET has completely switched to modular training technology.

Modular plans and programs have been developed to update the content on the basis of employers' requirements in 246 specialties, the content of which is agreed with employers. Colleges have the opportunity to change up to 60% (with DT up to 80%) the content of the modules according to the requirements of employers.

Prospective establishment of a national system of credit units will be founded, following the example of the European Credit System for Vocational Education and Training (ECVET).

On behalf of the First President, part of the colleges are planned to be upgraded within the framework of the «Zhas Maman» project. In each region, at least 10 modern colleges with a developed MTB, foreign partners and teachers, new curricula and programs, as well as partnerships with major companies will be established. The program will be implemented until 2022.

A draft law «On the status of the teacher» is currently being developed, which provides incentives for pedagogical workers, protection from unforeseen checks and unusual functions, and a social guarantee.

Since 2013, educational institutions have entered primary data of administrative reporting in the NEDB. In the NEDB, the process of data collection from 17794 educational organizations (except higher education) is automated for subsequent automatic reporting.

## A.3: The context of VET

### A.3.1 Socioeconomic context

The economy of the RK is developing in the conditions of gradual improvement of the internal and external economic situation. From 2016 to 2018, the economy continues to grow positively. The volume of GDP per capita for 2018 is 9403 dollars per person (70th place in the world)<sup>1</sup>. Thanks to raw materials supplies, Kazakhstan ranks 41st in the world in GDP terms for 2018, based on an estimate of purchasing power parity with a volume of \$ 499.6 billion <sup>2</sup> (Table 6).

**Table 6. Rate of GDP growth valued at PPP**

	2014	2015	2016	2017	2018
GDP PPP, billion USD	407,8	412,7	460,7	472,2	n/a
Growth rate, %	4,3	1,2	1	2,5	n/a

Source: <http://economy.gov.kz>

Kazakhstan's GDP growth in 2018 was 4.1% and ensured with positive dynamics in all sectors of the economy. The largest contribution to the growth of the economy was in the manufacturing, mining, wholesale and retail trade, transport and warehousing, real estate operations (Source: <https://kursiv.kz/news/finansy/2018-07>). Per capita GDP in 2018 was \$9403.2, which is \$3403.5 less

<sup>1</sup> Report for selected countries and subjects, International monetary fund

<sup>2</sup> Report for selected countries and subjects, International monetary fund

than in 2014. Until 2016, there was a 40% decline in per capita GDP, but over the past 2 years, per capita GDP has increased by 18% (*Source: SC MNE*).

Kazakhstan ranked 58th in the list of countries with the highest level of human development (*Source: Report of the United Nations Development Program (UNDP)*). Kazakhstan became the first state among the CIS and Central Asia countries to hold an international exhibition «EXPO-2017».

Kazakhstan participates in the ranking of countries on the application of favorable business conditions Doing Business, rising to 8 positions from 36 place in 2017 on the 28th in 2018 among 190 countries. In 2017 the State Program «Digital Kazakhstan» was approved. This program identifies companies planning to introduce digital technologies with the transition to the level of «smart production», opened the international technology park of IT startups «Astana Hub» (more than 20 startup projects).

In 2018 «Astana» International Financial Centre (AIFC) was opened, which purpose is to provide financial services of international level. The objectives of AIFC are to promote investment in the country's economy, create an attractive environment for investment in financial services, develop the Kazakhstan securities market and ensure its integration with international capital markets.

In 2018 the population of Kazakhstan was 18 million people and increased by 8% in 5 years (*Table 7*).

**Table 7. Total population**

Year	2014 year	2015 year	2016 year	2017 year	2018 year
Total	17 160 855	17 415 715	17 669 896	17 918 214	18 608 079
Male	8 284 613/48%	8 413 101/48%	8 541 800/48%	8 668 478/48%	8 937 928/48%
Female	8 876 242/52%	9 002 614/52%	9 128 096/52%	9 249 736/52%	9 670 151/52%

*Source: SC MNE*

Annual population growth of the republic in 2018 was 279,513 people, which is 1.55% compared to the previous year.

Since 2013, the pace of urbanization has accelerated in Kazakhstan. Centers of attraction of internal migration remain two large cities – Nur-Sultan and Almaty, representing together almost half of all internal migrants in 2017 (24% for the city of Nur-Sultan and 21% for the city of Almaty) (*Source: SC MNE*).

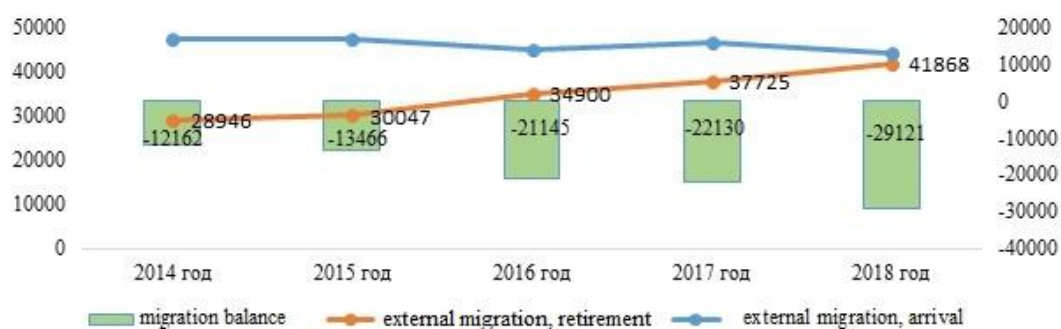
Proportion of the population with incomes lower than subsistence wage in 2018 was 3.7%, increasing by 0.9% since 2014. Unemployment rate has declined by 0.2% since 2014, to 4.8% in 2018.

### A.3.2 Migration and refugee flows

For the period from 2014 to 2017 131618 people emigrated from the RK, 62715 people immigrated. Current migration deficit indicates an increase in the outflow of labor (*Figure 2*).

**Figure 2. External migration and migration balance of RK for 2017**



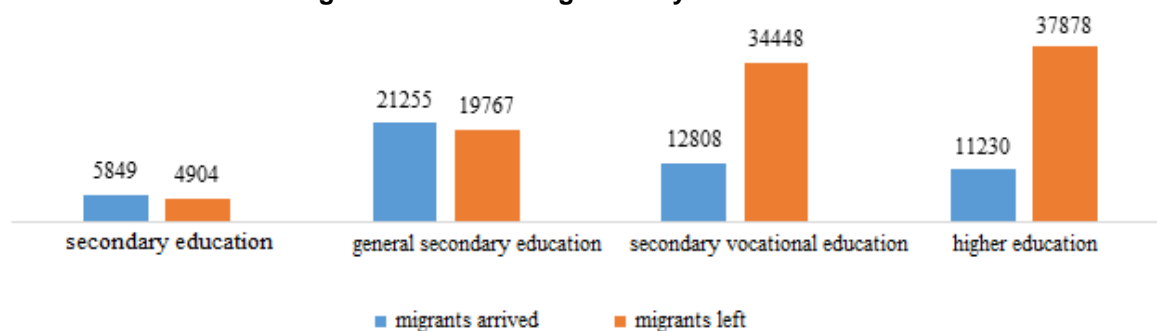


Source: SC MNE

Analysis of statistics for the last 4 years shows that immigration was mainly from Uzbekistan (42% of 62.72 thousand people), the Russian Federation (25%), China (11%) and Kyrgyzstan (5%). Moreover, 83% of the total immigrated population for 2014-2017, which is due to state support for returnees.

In terms of education for migrants and immigrants, the analysis indicates an increase in the outflow of migrants with higher and secondary vocational education and the influx of migrants with basic secondary and general secondary education. Thus, for Kazakhstan the problem of «brain drain» is actual (72 thousand people came out with secondary professional and higher education, and 24 thousand people arrived with the same education) and replacement of highly qualified labor force, low-skilled (came out with the main secondary and general secondary education - 24, 7 thousand people, and arrived - 27 thousand) (Figure 3)

Figure 3: External migration by education level



Source: SC MNE

In 2017, 37.7 thousand people left the country, of which 54% are qualified personnel (Source ST MNE). This outflow of labor forces enterprises to search for qualified labor capable of performing innovative and complex jobs to increase the productivity of companies.

Speaking about migration on gender grounds, it is possible to conclude that high percentage of migration of women: External migration on all flows – 77% of women, migration with CIS countries – 54% are women (Source: SC MNE).

In Kazakhstan, immigrants often were in a difficult housing situation, employment and health care. Situation was complicated by the fact that they were placed in regions with excessive labor force and in connection with high competition in the labor market, they began to engage in activities not related to their education, which led to a decrease in the quality of human capital (Source: *The current state of the labor market in Kazakhstan: edited by Z. Shaukenova. - Kazakhstan Institute for Strategic Studies under the President of the RK, 2017. - 100p.*).

The processes of internal labor migration are actively involved in the creation of a balanced labor market. During the period under review, the number of internal migrants increased from 405.6 thousand people (in 2014) up to 930.8 thousand people (in 2017), which indicates an increase in mobility of the population.

If we consider the proportion of regions in the total number, the main regions where outflow is observed are the South Kazakhstan region (14.2%), Almaty region (12.1%), Almaty city (10.4%), Nur-Sultan city (9.2%). The dynamics for 4 years shows that the greatest growth of outflow is observed in Karaganda (164%), Kostanay (162%), North Kazakhstan (NK) (161%), Aktobe (152%), Pavlodar (152%) regions.

Outflow of population from the southern regions is due to an abundance of labor, leading to an increase in unemployment and forcing to seek employment in other regions. The bulk of internal migrants are sent to large cities – Almaty (15.6%), Nur Sultan (14.4%). At the same time, the largest growth of the inflow is observed in Karaganda (163%), Kostanay (161%), NKR (161%), Pavlodar (152%) regions (*Table 8*).

In 2017, as a result of migration to all streams, the number of people who arrived in cities and left the cities is 595.6 thousand and 570.7 thousand people, respectively. The migration balance for all flows according to statistics reached +24.9 thousand people. In total, in rural areas, the number of villagers, due to migration, decreased by 47 thousand people. Thus, in Kazakhstan, since 2013, there has been a tendency to accelerate the pace of urbanization.

**Table 8. Main indicators of internal migration by regions of the RK (departed) for 2017**

Region	Total left for 2014-2017	percentage of total number	dynamic for the last 4 years
The Republic of Kazakhstan	2 408 781	100%	144%
Akmola region	102 068	4,2%	146%
Aktyubinsk region	98 044	4,1%	152%
Almaty region	290 953	12,1%	137%
Atyrau region	64 099	2,7%	140%
West Kazakhstan region	95 704	4,0%	140%
Zhambyl region	127 774	5,3%	149%
Karaganda region	152 424	6,3%	164%
Kostanay region	119 732	5,0%	162%
Kyzylorda region	97 254	4,0%	145%
Mangistau region	79 920	3,3%	125%
South Kazakhstan region	340 914	14,2%	139%
Pavlodar region	91 720	3,8%	152%
North Kazakhstan region	81 973	3,4%	161%
East Kazakhstan region	194 864	8,1%	149%
Nur-Sultan city	221 136	9,2%	129%
Almaty city	250 202	10,4%	148%

Source: SC MNE

This is due to the industrial growth of these regions and the growth in jobs in them, as well as the amendments to the Law of the RK «On Population Migration» in 2015, which established a holistic system for regulating the resettlement of citizens. It provided for the economic stimulation of voluntary resettlement of the population from labor-surplus regions to regions with high potential for the development of the labor market.

The government identified the regions of resettlement (East Kazakhstan, Kostanay, Pavlodar and North Kazakhstan regions) and established regional quotas for the reception of immigrants. They



determine the maximum number of families of immigrants arriving for permanent residence in the above-mentioned regions, provided by measures of state support and promotion of employment. Since 2014, state program «Serpín-2050» has been operating in Kazakhstan, aimed at training and employing young people from the southern regions of the country with an abundance of labor resources in the east, north and west of Kazakhstan - in regions experiencing a shortage of personnel.

There are internal migration mainly from villages to cities where migrants do not have access to government assistance.

Thus, in Kazakhstan, internal and external migration processes are actively proceeding, which affect the Kazakh labor market.

### A.3.3 Education sector context

Graduates of schools after receiving primary secondary and general secondary education can enter colleges. But practice shows that colleges are filled with 9-grade graduates, including those who are experiencing difficulties in education and 11-grade graduates, including those who have gained a low score on Unified National Testing (UNT) and were unable to enter higher education institutions (HEI).

At entry into college education for middle-level specialists and junior engineers, applicants pass entrance examinations (in the form of testing or examination) according to the rules of college admission. Each college develops admission rules according to the Standard Rules for Admission to Education organizations, implementing educational programs of the type approved by the , order of the Minister of Education and Science of the RK № 578<sup>3</sup> dated from October 18, 2018 and for each specialty determines disciplines.

School graduates of 9 and 11 grades can go to study in the working qualification free of charge, and in the future, if they wish to continue training for a middle-level specialist free of charge, on a competitive basis or at a cost.

Graduates of 11 classes or colleges may apply to applied bachelor's programs. After the graduation of the applied bachelor's degree, the graduate can go to production. The rules of admission after the applied bachelor's degree to HEI are currently being worked out.

A 5-year analysis shows that colleges receive mostly basic secondary education (64% in 2018). The proportion of school graduates enrolled in TVET on the basis of primary secondary education has increased by 4.5% over the past five years. In 5 years, there has been a decline in the proportion of school graduates enrolled in TVET on the basis of general secondary education by 4.5% (Table 9).

**Table 9: Proportion of TVET students, who entered the basic secondary and general secondary**

Year	2014	2015	2016	2017	2018
Basic secondary education (9 gr.)	59,5	61,1	60,9	61,8	62,1
General secondary education (11 gr.)	40,5	39	24	34	36

Source: SC MNE

Since 2018, for TVET graduates who want to continue their studies at universities in their specialty, shortened terms of study are provided. Since 2014, there has been an increase in proportion of TVET

<sup>3</sup> Standard Rules for Admission to Education organizations, implementing educational programs of the type approved by the order of the Minister of Education and Science of the RK № 578<sup>3</sup> dated from October 18, 2018

students, who entered the university by 1%. Proportion of enrolment who entered TVET on the basis of the basic secondary education for 5 years increased by 5% (Table 10).

**Table 10: Proportion of TVET students, who entered HEI, %**

Year	2014	2015	2016	2017	2018
TVET students, who entered HEI	9%	8%	9%	9%	10%

Source: SC MNE

Number of TVET students decreased by 8% in five years, number of HEI students increased by 12%. In 2018 proportion of students studying in TVET from the population aged 14-28 was 12.7%, and the university - 14.1%.

### A.3.4 Lifelong learning context

Strategic Development Plan of the RK up to 2025 includes 7 systemic reforms and seven priority policies for the implementation of the «Kazakhstan-2050» Strategy. Reform number one means new human capital. «Development of human capital, which possesses high-quality and demanded skills of the XXI century, is a priority task on which further growth of the economy of Kazakhstan will depend.

The competencies of the new time include readiness for continuous training and development of necessary skills», says the Strategic plan for development of the RK until 2025. The Fundamental change for Kazakhstan should be the transition from a formalized education system - to continuous improvement of skills and competencies throughout its life.

In SCSE, a strategic document for all levels of education, the role of TVET is limited as an instrument for the socio-economic integration of a limited category of population - young people of typical age. In the meantime, international practice involved the use of the TVET's capacity for integration into the labor market of adults who need to upgrade their competencies or acquire a new profession.

Principle of continuing education or «Lifelong Learning» (LLL) is being implemented, by 2022 all educational programs of the TVET level will be transferred to a modular and competent approach, credit system began to be introduced in colleges since 2018. Non-formal education has been introduced into the legislation, but there are no mechanisms for recognition and confirmation of non-formal education. A person has a maximum of 10 years of formal education.

In order to ensure the continuous improvement of the qualifications of employees, it is necessary to develop and promote a system of continuous training involving employers, employees and educational organizations. In order to confirm qualifications and, accordingly, to give impetus to the development of a system of continuous learning, it is necessary to develop a system of independent evaluation (certification) of qualifications within the framework of the National Qualifications System.

According to an analysis by the Organization for Economic Cooperation and Development (OECD), employers in Kazakhstan do not actively offer their employees training. Only 28% of employers offered training for their employees in 2017, which is consistent with countries like Turkey (28%) and Portugal (32%), and well below the OECD average of 45%. The maximum number of employers who offer employees training, according to the OECD, is available in countries such as China (79%), Ireland (74%) and Sweden (71%).

As a result, only 3.4% of employees in Kazakhstan are trained, re-trained or advanced training courses annually.

The WB project includes 2 billion tenge for training 5 thousand SME employees. The National Chamber of Entrepreneurs «Atameken» (NCE «Atameken») will determine the providers. Large enterprises follow smart career approach and train their employees in the changing working

environment, so employers notify employees of these changes and schedule where they will be directed in the future. Such measures should now be implemented by all employers and in this direction for TVET there is a great potential for activities to provide training for working employees.

### A.3.5 International cooperation context: partnerships and donor support

International cooperation in the field of TVET is realized in the form of cooperation with the WB, GIZ (German Corporation for International Cooperation), the EU (ETF, CAEP), WS International and WS Europa. Active cooperation between the RK and the OECD in the field of professional education has been implemented since 2008 within the framework of the OECD Eurasian competitiveness Program. The Government has adopted a Road map to implement the OECD recommendations and best practices.

«TRP in Kazakhstan». In 2017 and 2018 the study was conducted by Holding at the regional level and recommendations were worked out.

The European Union has provided support in a number of areas. The Central Asian Education Platform (CAEP) project is one of the main pillars of the European Education Initiative in Central Asia with the main goal of increasing cooperation between the European Union and Central Asia, as well as regional cooperation among Central Asian countries in order to strengthen educational reforms in the region.

In 2016 the RK officially launched the project «Development of labor skills and stimulation of jobs», aimed at improving the employment and skills of those who need training. This Project is implemented within the framework of the Agreement on Loan № 8490-kz between the RK and the International Bank for Reconstruction and Development from July 20, 2015 this is part of the comprehensive cooperation of the World Bank.

The next form of international cooperation is membership in the WS movement. In 2014, the RK became the 70th member of the International Association of WS. Participation in WS championships, has an impact on the training of qualified personnel for the country. In 2016 joined WS Europa. Within the framework of the project «Strategic Alliance in Dual Training in the RK», cooperation with German enterprises is being conducted. GIZ conducts international conferences to disseminate Kazakhstan's experience in the implementation of DT.

In 2015 NCE «Atameken» signed an agreement on the implementation of a partnership project on professional training with The Trier Chamber of Commerce (Germany) aimed at strengthening the role of enterprises, regional chambers of entrepreneurs in the organization of DT.

Every year students and teachers of HEI go on exchange for training and pass foreign internships. As for TVET, college teachers are trained abroad, and the issue of exchange for the training of students of the TVET is not fully worked out. There are colleges that cooperate with foreign educational organizations on the exchange of students, but such colleges are few.

## Building block B: Economic and labour market environment

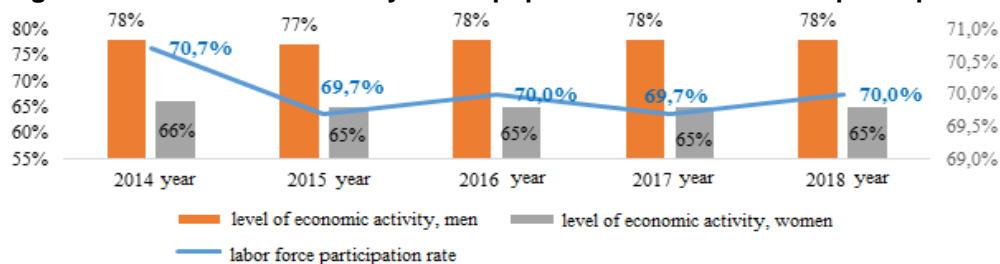
### B.1: VET, economy, and labour markets

#### Identification of issues

##### B.1.1 Labour market situation

In 2017, the proportion of the working-age population grew by 0.5% compared to 2014. In 2018, the number of economically active people<sup>4</sup> was 9.139 million, increasing by 2% over a 5-year period. The labor force participation rate has declined by 0.7% (Figure 4).

**Figure 4. Level of economically active population and labor force participation**

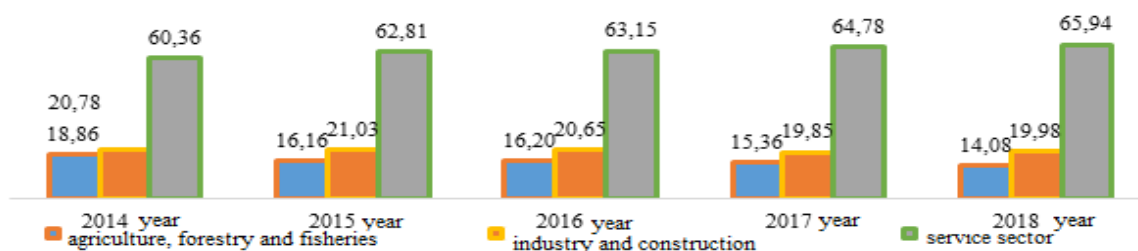


Source: SC MNE

An important indicator for the labor market is the level of employment by type of economic activity. For example, 8.7 million people were employed in various sectors of the economy in 2018 at the age of 15 years and older. More than half of employed 51.5% (4.5 million people) are men, 48.5% (4.2 million people) are women. Employment rate in 2018 fell to 66.60% (67.10% in 2014). Average rate of employment among women is unchanged.

The economically active population is more concentrated in the service sector, in terms of trade, car repair, transport and storage, the figure rose by 5.58% (in 2014 60.36%, 2018 65.94%). Employment in agriculture, forestry, and fisheries declined from 18.86% in 2014 to 14.08% in 2018 (Figure 5).

**Figure 5. Employed population by industry, (%)**



Source: SC MNE

<sup>4</sup> Labor resources of Kazakhstan is the number of economically active population (Committee on Statistics of the MNE of Kazakhstan since 2016 uses the term «labor force») in the Republic of Kazakhstan.

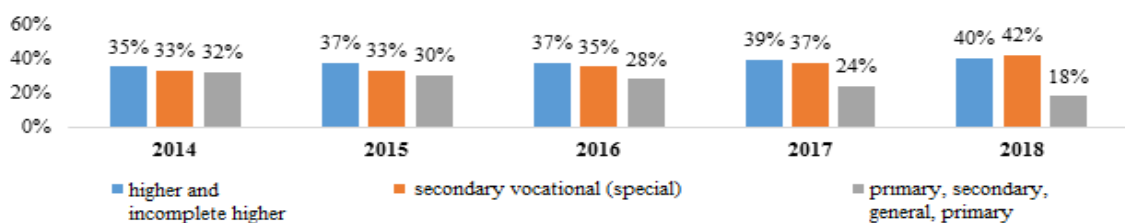
Proportion of the public sector (public institutions and enterprises with a public ownership share of more than 50%) in employment creation averaged 25.4% of the employed population between 2015 and 2017. This figure is one of the highest in comparison with OECD countries, where the average share of the public sector in the employment structure is 18%.

In comparison with OECD countries, the contribution of small and medium-sized businesses (SME) to employment generation is insufficient. The average share of employment in small and medium-size enterprises in the OECD is 64%, 1.4 times higher than in Kazakhstan in 2017 (45%). Employment in small and medium-sized enterprises grew by 4.6% in 2018 compared to 2015.

The higher and TVET in 2018 had 7.1 million people, which is 84.5% of employed population. Proportion of women employed with higher education and TVET is higher compared to men. In the section of the received education there is an increase among the employed population with TVET, its value was 46.1% (Figure 6).

Experience is one of the main criteria for successful employment. It is rather difficult task to get a job without having the necessary experience. The lack of necessary experience often leaves the graduates without work, and the desire to «earn» forces to change the sphere of activity. Thus, 63% of college graduates in 2018 are employed in different directions of the economy.

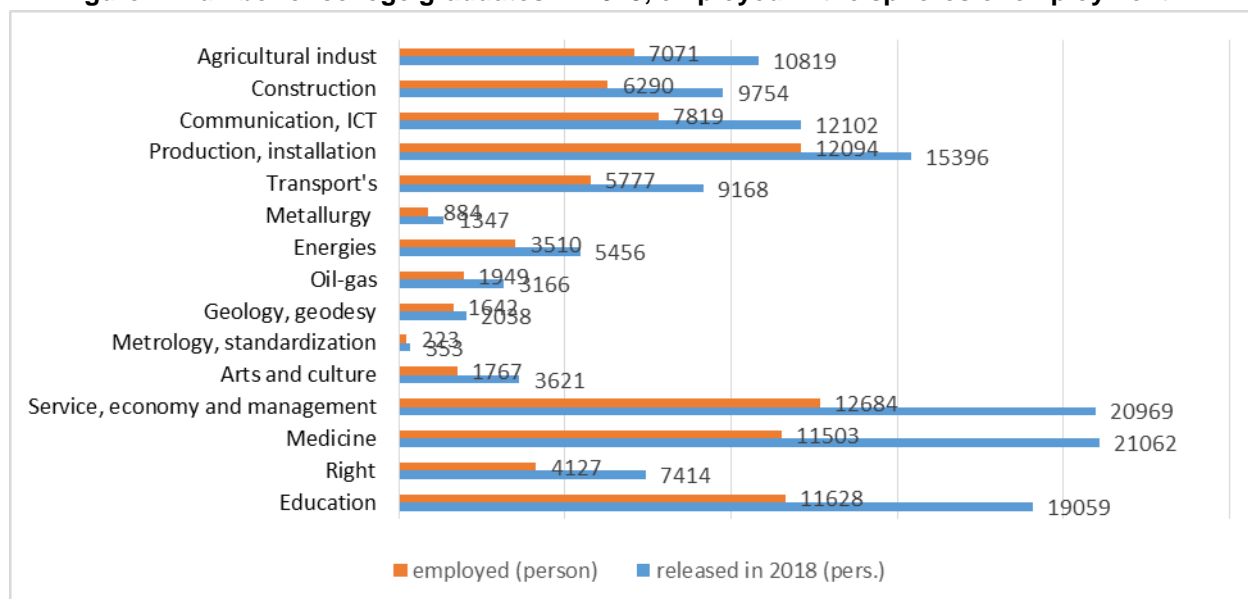
**Figure 6. Education level among the employed population, %**



Source: SC MNE

According to the branches of the economy, the largest number of employed (from among of graduates of TVET) is in the specialty «geology and geodesy» -80.6%, «production and installation» - 78.5%, «metallurgy» - 65.6%, «agriculture» - 65.4%, «communications and ICT» - 64.6% and «Construction» - 64.5% (Figure 7).

**Figure 7. Number of college graduates in 2018, employed in the spheres of employment**



Source SC MNE

The least graduates of 2018 began their work in the field of art, law and medicine.

Level of education plays an important role in the employment of young people and in reducing unemployment. As of 2018 Kazakhstan's working youth (from 15 to 28 years old), with a total secondary, technical, and vocational, post-secondary, and higher education, amounted to 2.1 million, or 60% of the country's entire youth.

Unemployment rate for 2018 among young people with higher and incomplete higher education is 0.4%, among young people with secondary and professional (special) education - 8.1%, with initial professional - 1% (Figure 8).

According to IAC MES, 70% of employers are not satisfied with the skills of students of TVET and universities<sup>5</sup>. As the official data of the SC MNE show, the largest number of unemployed by the level of education falls on persons who have a secondary professional (special) education.

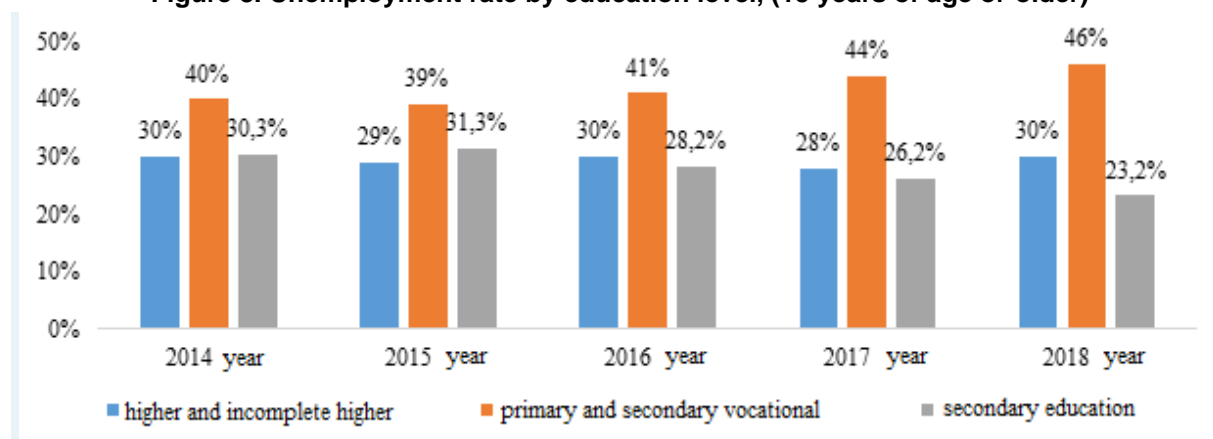
Analysis of focus groups conducted among recent TVET graduates shows that, the main reasons why young graduates can not find employment are: The isolation of the education system from the labor market, the engineering and pedagogical composition of colleges does not change, accordingly their teaching methods do not always correspond to time, in the country there are no employment offices, weak pro-investment work, lack of experience, lack of business communication skills, lack of information about the labor market, ways of finding work, lack of information, lack of information on career growth.

*«The choice of profession is unconsciously taking place. We did not have an idea of the future profession. Education is out of production»*

Source: College graduates

<sup>5</sup> <http://iac.kz/ru/data/tehnicheskoe-i-professionalnoe-obrazovanie>

**Figure 8. Unemployment rate by education level, (15 years of age or older)**



Source: SC MNE

Unemployment over the last five-year period remains at 5%, down by a small 0.1% from 2014. The proportion of men in the number of unemployed was 45.5%, of women - 54.5% (Table 11).

The highest unemployment rate is observed in the group from 30 to 34 years. In the age group belonging to the TVET graduates, the unemployment rate decreased by 2.4% in 5 years.

**Table 11: Unemployment rate by age group, %, 2014-2018**

Age group	2014	2015	2016	2017	2018
16-19	1,2%	1,2%	0,8%	0,5%	0,8%
20-24	10,0%	10,7%	9,1%	8,2%	7,6%
25-29	18,1%	16,6%	16,1%	16,3%	15,8%
30-34	20,8%	21,5%	21,8%	21,6%	24,5%
35-39	12,1%	12,4%	13,6%	12,6%	12,7%
40-44	10,2%	9,2%	10,3%	10,4%	9,0%
45-49	10,0%	9,9%	9,8%	10,6%	9,0%
50-54	9,2%	9,1%	9,8%	9,3%	9,0%
55-59	7,1%	8,5%	7,3%	8,8%	8,8%
60-64	1,4%	0,8%	1,4%	1,5%	2,8%
65 and over	0,0%	0,0%	0,2%	0,1%	0,0%

Source: SC MNE

During the period under review, youth unemployment rate in the age groups from 15 to 28 years inclusive decreased from 4.2% to 3.6% (Figure 9).

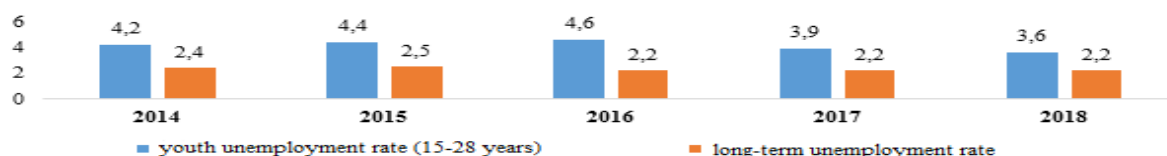
Despite positive official data of unemployment rates or youth unemployment rates of the SC MNE, the results of sociological research of the research center «Youth» show that the country's youth are not sure that their problems, in terms of employment, are solved by the state. Young people believe that in Kazakhstan there are not enough measures and organizations that express their interest not in words or on paper, but in real affairs.

Indicators such as self-employment, informal employment, hidden unemployment and occupational imbalances remain labor-market problems.

In the country until 2018, the concept of a self-employed person everywhere was interpreted in different ways. In the Law on the formalization of Employment of the Ministry of Labor and Social Protection of the population of the RK (MLSP), the concept of «self-employed person» was replaced by the concept of «**independent worker**». This concept corresponds to the classification of occupations of the population of the International Labor Organization.



**Figure 9. Youth and long-term unemployment rate**



Source SC MNE

In Kazakhstan, as a result of the implementation of the program «Enbek», as well as the project «Free TVET» for the period from 2014 to 2018, there is a decrease in the total number of self-employed by 13.2%. The rate of growth of this indicator in the year is noted Nur-Sultan, Almaty and Mangistau region, which is explained by high internal migration.

**Table 12. Self-employed population by type of terrain, (thousand people)**

	2014	2015	2016	2017	2018
total	2 400 370	2 138 425	2 210 541	2 099 222	2 082 522
city	830 591	789 465	788 718	771 786	790 754
village	1 569 779	1 348 960	1 421 823	1 327 436	1 291 768

Source: SC MNE

During the period under review, the number of self-employed people has been declining in both urban and rural areas. According to the SC MNE, 62% of total self-employed population lives in the village.

During the reporting period, the number of self-employed people living in the village decreased by 18% (2014 - 1569.8 thousand people, 2018 - 1291.7 thousand people), which indicates an improvement in the employment rate due to an increase in the number of employed population as a whole (Table 12).

Of the total self-employed population, 22.6 % are young people aged 15-28 years. For this category self-employment is attractive, young people choose this form of employment for self-realization as the first step to their own business<sup>6</sup>.

For 2014-2018 negative dynamics in the number of self-employed in the field of agriculture, forestry and fisheries (a decrease of 30.6% or 350, 9 thousand people) and industry and construction (a decrease of 13.7% or 32.9 thousand people). A small positive trend of 6.1 % was in the number of self-employed in the service sector.

In 2018 a high proportion of self-employed population is noted in the labor-surplus southern regions of the country (Turkestan region (359, 8 thousand people), of which 49.7% are engaged in services, Almaty region (270.9 thousand people), the proportion of self-employed in industry and construction increased by 22.8% and Zhambyl region (180, 4 thousand people).

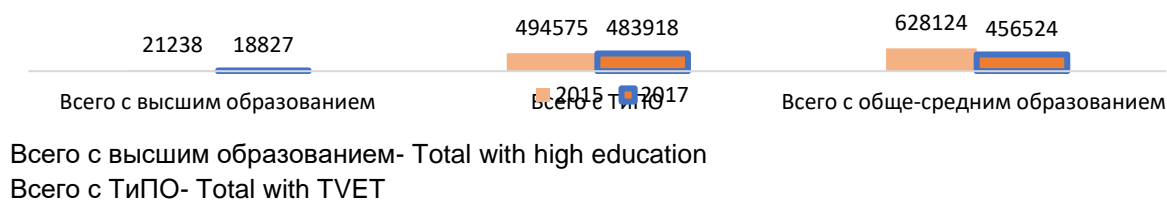
At the same time as these indicators, there is a change in the structure of the informal employed population. In 2018, 51% of the informal employment were men and 49% were female.

<sup>6</sup> [Social'nyj portret samozanyatogo naseleniya v yuzhnyh regionah Respubliki Kazahstan] - Almaty, 2018. – Kazstatinform – 124 p., figure 80, 30 [in Russian]



In 2017 the number of informal workers from the TVET was 483,918 people, informal employment is more characteristic for the population with a total average and TVET (Figure 10).

**Figure 10. Structure of informal workers in terms of education level, (person), 2015, 2017**



The dynamics of hidden unemployment during the reporting period practically did not change (in 2015, 3 quarter was 0.4%, 2018 2 quarter was 0.3%).

In general, the country is taking state measures to reduce the growth of unemployment, to establish the relationship between education and the labor market and their impact, however, there are some problems:

- level of youth unemployment is decreasing, but there is a discrepancy between the skills received in the TVET according to the labor market requirements;
- employment in the informal sector remains a constraint on socio-economic development;
- outflow of the population abroad creates significant distortions in the regional labor markets;
- lack of analysis and tools to assess the effectiveness of state measures.

### B.1.2 Specific challenges and opportunities: skill mismatch

In the country main instrument for regulating the demand and supply of specialists to the labor market, ensuring the interaction of the spheres of education and the labor market is NQF. In Kazakhstan the NQF is in the formation stage.

In 2016 a new methodology for the development of the IQF was adopted, more than 30 sectoral frameworks of qualifications were updated and approved. In 2019, it is planned to develop 38 IQF in priority sectors and update the NQF in the levels of technical and professional education.

Since 2012, 449 professional standards have been developed in Kazakhstan, covering all priority sectors of the economy and 1686 workers' professions, 369 employees.

In 2016 with the adoption of the new Labor Code of the RK, the functions to approve professional standards were transferred to the NCE «Atameken».

According to the results of the employers focus groups conducted in the framework of the study «TRP in Kazakhstan» at the regional level in 2017-2018, employers are not fully satisfied with the training of the personnel of the TVET system.

At the state level, measures are being taken to solve these problems:

For the legislative provision of the NQF, amendments to The Labor Code<sup>7</sup> and in this introduced in particular responsible authorities for the development of all components of the NQF are identified.

Since 2016 work on the NQF has been continuing under the Partnership Agreement between The Government of the RK and For Reconstruction and Development under the project «Development of

<sup>7</sup> Labor Code of the Republic of Kazakhstan Code of the Republic of Kazakhstan, №414-V LRK dated November 23, 2015.

Labor skills and Promotion of Jobs». The term of this project is 5 years (2016-2020). As part of this project 106 professional standards were approved (Source <http://atameken.kz/>).

Assessment of the sufficiency of knowledge and skills of graduates is carried out through independent certification of specialists. Assessment of level of professional training of TVET graduates since 2016 has been transferred to a competitive environment. In 2018, 33 certification centers were established, which are included in the register<sup>8</sup>, which is maintained by the NCE according to the LRK on «National Chamber of Entrepreneurs». Most of these centers operate in associations

Colleges, working with certification centers and industry associations, using the results of graduates' certification, concluded that changes should be made to the organization and content of the college learning process to improve the quality of training. In 2018, however the proportion of independently certified graduates declined by 9% compared to 2017 (in 2017- 44%, 2018-35%). Decrease in the proportion of certified graduates occurred due to changes in the NLA, certification was no longer mandatory.

In order to ensure that graduates' skills meet the needs of the labor market, TVET system was the first to adopt a modular and competent approach to training. Updated content of educational programs based on employers' requirements for 26.8% of the specialties of TVET level. Colleges have the opportunity to change the content of the modules up to 50% (up to 80% with DT), taking into account employers' requirements.

However, these measures do not yet provide a practical orientation for training programs. In leading international practice, employers' surveys and alumni tracking are conducted to obtain information on the relevant competencies of the labor market. In the RK methodology of these instruments should be developed and regular surveys should be conducted.

### B.1.3 Specific challenges and opportunities: migration

Migration processes have a significant impact on the formation of the labor market in Kazakhstan, as well as on the quality of labor resources.

In 2018, 41.8 people left the country, between 2014 and 2018, the migration balance was negative, and it increased 2.4 times over this period. (see *diag. 1 block A 3.2*). Mostly Kazakhstan citizens migrate to countries of the Commonwealth of Independent States 37.7 thousand, to other countries 4.1 thousand people. During the reporting period, the number of people who have been out of other countries increased by 1,284 or 31 %. (*Table 13*).

**Table 13. Migration with other countries and with CIS countries (departure), people**

Category	2014	2015	2016	2017	2018
<b>Migration with other countries</b>					
<b>Total</b>	2 848	3 055	3 662	4 007	4 132
<i>Men</i>	1 207	1 292	1 583	1 731	1 799
<i>Women</i>	1 641	1 763	2 079	2 276	2 333
<b>Migration with CIS countries</b>					
<b>Total</b>	26 098	26 992	31 238	33 718	37 736
<i>Men</i>	11 944	12 182	14 311	15 570	17 246
<i>Women</i>	14 154	14 810	16 927	18 148	20 490

<sup>8</sup> The regulation on the procedure for the formation and maintenance of the Register of Certification Authorities and the Register of Certified Professionals was approved by the decision of the Presidium of NCE «Atameken». Protocol №22 dated 12/28/2016.

Source: SC MNE

A negative migration balance that has emerged indicates an increase in outflow or a brain drain. In 2018, 22.4 thousand qualified personnel left Kazakhstan abroad, or 53% of them, 29% more than in 2014. There is the largest increase in the outflow of people with technical education, economists, teachers and medical workers (see Table 4). In 2018, only 4.8 thousand people of skilled personnel arrived, which is 28% less than in 2014. In general the percentage of arrivals from total amount in the RK was 38%, in 2014 - 39%. The migration balance for qualified personnel increased by 1.8 times during the reporting period (2014 - 9.7 thousand people, 2018 - 17.8 thousand people), (balance is 17.8 thousand people).

Thus, qualified specialists leave the country five times more than those arriving with a similar education, which creates an imbalance in the labor market (Table 14).

**Table 14. External migration in specialties (age 15+), persons**

Years	2014		2015		2016		2017		2018	
	Dep.	Arr.	Dep.	Arr.	Dep.	Arr.	Dep.	Arr.	Dep.	Arr.
Architectural and construction	682	299	695	380	776	449	712	259	515	116
Medical	810	600	911	523	991	455	1062	484	1225	396
Pedagogical	1865	758	1779	890	2160	803	2333	700	2478	619
Technical	4376	1448	4860	1493	6041	1296	6595	1302	7355	1214
Economic	2414	822	2541	852	3248	807	3631	826	3897	653
Juridical	630	244	719	253	807	240	874	226	844	171
Agricultural	400	197	324	206	378	179	376	151	398	120
Others	5082	2205	5555	2 156	5357	1795	4 798	1652	5941	1596
Not specified	9	13	16	17			2038	5600	2265	4765

Source: SC MNE

Employers use both legal and illegal foreign labor in their work. More than 500 thousand people work in the country. According to the International Organization for Human Rights 1,381,681 people (2015) temporarily staying in Kazakhstan, many indicate as the goal of the visit «private visit», «study» or «tourism», receive registration and then work without permission. Kazakhstan is currently regarded as a border country of labor migration because of low living standards in neighboring countries (Uzbekistan, Kyrgyzstan, Tajikistan).

As a rule, the labor legislation of the Republic of Kazakhstan is not respected in relation to illegal labor migrants. They work without a labor contract, receive low wages, save on professional development, etc.

Thus, in the sphere of migration policy of the country there are the following external challenges. These are as follows:

- risk of low-skill labor growth due to the expected influx of, first of all, migrant workers from Central Asia (see A.3.2);
- risk of increasing outflow of skilled personnel and talented youth.

## B.1.4 Specific challenges and opportunities: digital transformation

Since 2018 national program «Digital Kazakhstan»<sup>9</sup> has started in the country. Short-term vocational training programs provide modules for training in digital literacy. As of January 1, 2019, 9% of the unemployed and unproductive employed have mastered the initial level of computer literacy.

In 2018 MLSPP approved a plan to train digital literacy for social-labor service recipients, which last year trained 12% of the economically active population in digital skills.

Within the framework of the program «Digital Kazakhstan» began work on revising the content of all levels of education through the development of digital skills of all specialists.

In the republic, 16 centers of competence in IT technologies (support centers) were established on the basis of the existing leading colleges, which train specialists for the digital sphere. The centers are a methodological, expert, training base for implementing the international standards of WS. The core IT competence center is established in Nur-Sultan, which works in partnership with CISCO, Dynamics Technologies, KazInTech Corporation, Shag, etc. The Centers within the Program for the Development of productive Employment and Mass Entrepreneurship organize short-term courses for unemployed and unproductive self-employed citizens in the required professions and skills in the labor market, taking into account the development of digital skills.

But, despite the measures taken, there are still challenges that require policy responses:

- production and technological processes of enterprises are updated every 3-5 years, including automated, so in order to ensure the quality of training of colleges it is necessary to train students on modern equipment;
- it is necessary to develop digital skills and level of IT teachers and masters of VT.

### Description of policies

## B.1.5 Strategic policy responses involving education and VET

Labor Code<sup>10</sup> has been amended to provide legislative support to the NQF in particular the responsible authorities for development of all components of the NQF have been identified.

Within the framework of the Agreement on Loan №8490-kz between the RK and the International Bank for Reconstruction and Development of July 20, 2015, work on the NQF is continuing. The term of this project is 5 years (2016-2020).

Coordination, management and monitoring of the implementation of state programs affecting the sphere of professional education are carried out by the LEB in cooperation with the MES, MLSPP, MNE. All these projects are under the control of the Government of the RK.

According to the road map of employment - 2020, 127.3 thousand people were trained, of which 72.2% were employed.

The program, adopted in 2011, envisaged anti-crisis measures to contain the growth of unemployment and was updated to the tasks of creating conditions for the involvement of unemployed and self-employed people in productive employment. Thus, the road map of employment - 2020 has developed into the program «Development of productive employment and mass entrepreneurship for 2017 - 2021 «Enbek», the implementation of which began in 2017 (*Table 15*).

<sup>9</sup> Decree of the Government of the RK dated December 12, 2017 №827 «On approval of the State program «Digital Kazakhstan»

<sup>10</sup> Labor Code of the Republic of Kazakhstan Code of the Republic of Kazakhstan dated November 23, 2015 № 414-V ZRK

**Table 15. Results of the program «Road Employment Map - 2020»**

years	2014	2016	2017	2018
Total number of participants, including, thousand people	195	189	564	703
employed after training, %	86%	97%	73%	96%

Source: <https://prz.enbek.gov.kz>

Special feature of this program is the involvement of self-employed, unemployed and other people without qualifications, including young people in productive employment. According to the MLSPP in 2018, 112.7 thousand tenge was allocated for the implementation of the program. The program works in 3 directions.

One of them is providing the participants of the TVET program (the project «Free TVET for all») with short-term professional training. The target group of the first-line program is persons without professional education, 9-11 grade graduates and job seekers, unemployed and members of low-income families. The Program aims to implement such tasks as TVET training in the field of labor market, short-term vocational training in the skills and skills required in the labor market, implementation of the «Serpin» project and retraining of labor resources and reduced workers (see *Box C 1.3 for details*).

Active measure of promoting youth employment is the project «Youth Practice», which is intended for the graduates of TVET and HEIs who completed their studies for the last three years and not older than 29 years. Work in the framework of youth practice is temporary and the duration of practice is not more than six months. At the subnational level, the project is being implemented by Employment Centers. Youth practice is covered: In 2017, 9.1%, in 2018 - 10.4% of the total number of students of TVET and HEIs.

Projects «Youth Personnel Reserve» which is aimed at forming effective managers and «With a diploma - to the village» are also important mechanisms for supporting young people. Under this project, the State offers work in rural areas with appropriate social support for young professionals, which includes the payment of a lump-sum lift allowance in the amount of 70 MNU, the issuance of a budget loan for the purchase and construction of housing for a period of 15 years and the increase of the official salary of at least 25% specialists of social institutions located in rural settlements. In general, country is taking state measures to reduce the growth of unemployment, to establish the relationship between education and the labor market and their impact.

### B.1.6 The role of VET in remedies through active labour market policies (ALMPs)

Active policy of the state in the labor market is aimed at increasing employment and reducing structural unemployment. Government programs that provide vocational retraining and retraining are helping to achieve these goals. Therefore, since the beginning of 2000, The Government of the RK regularly approves and implements state programs aimed at increasing the employment of the population, but the first programs were not comprehensive, but fragmented and did not take into account the role of TVET<sup>11</sup>.

Since 2011, Government of the RK policy is aimed at a comprehensive, consistent solution of labor market problems with the participation of state resources, including the TVET system. The

<sup>11</sup> DGRK of June 3, 2000 № 833, «On the Program to Combat Poverty and Unemployment for 2000-2002»

implementation of state programs is aimed at ensuring that the workforce is best suited to the available jobs, that is, the supply matches the demand on the labor market.

For TVET organizations, the role in the labor market is as follows:

- career guidance work (assistance in choosing a profession and qualifications, information support, counseling and selection of educational programs);
- training services for entering the labor market (organization of vocational training, retraining and advanced training).

For example, in Kazakhstan, there is the «Enbek» program to engage the population in employment, which provides for the active participation of TVET organizations in mass education in popular professions on a free basis on the basis of colleges.

Within the framework of state policy, vocational training programs are being implemented that provide both training at workplaces, training centers of enterprises, and in TVET schools for youth, the unemployed, as well as for older workers whose profession has become obsolete (*Table 16*). These programs are implemented by the employment service in partnership with TVET organizations. In addition, the regional employment centers, together with TVE organizations, hold job fairs, information support for employers and citizens about the situation on the labor market. Colleges carry out career guidance work.

**Table 16. Performance on the results of the program «Enbek», 2018**

Title	Quantity
Short-Term Course Service Providers, units	931
including TVET organizations, units: Proportion of total number of colleges:	495 (60%)
Total short-term courses, persons, proportion of the number of unemployed	41656 (9%)
including training in TVET, persons: the proportion of students in TVET of the total number of courses attended	36447 (87%)
Total completed training, persons; Completion rate of short-term courses	38766 (93%)
including completion of training in TVET, persons	23189
Employed, from the number of completed,%	75,8

Source: MES, CHRD

Non-governmental organizations, support for the development of professional skills of the population, including among young people, is carried out through educational projects. These projects contribute to the increase in employment, the reduction of unemployment, etc. The activities envisaged under the projects are aimed at developing skills in agriculture, crafts and creativity. However, such activities are carried out one time.

### B.1.7 Identification of skills demand and its bearing on VET provision

System work on definition and forecasting of professional skills required in the labor market in the country is practically not conducted, there is no skill module bank and competencies necessary for forecasting in terms of occupations, which are required now and will be demanded in the nearest period.

Responsible bodies (MLSP, JSC «CHRD», DCESP) carry out work on determining and forecasting the need for the number of workers for short and medium-term periods in specialties and professions, but do not determine and predict the demand for professional skills in the labor market.

Existing 106 professional standards reflect employers' requirements for the knowledge, skills and competencies of employees. These standards are used for the development of educational programs



of TVET. But, the knowledge and skills gained by the TVET during the training period, in the market may no longer be relevant, as the educational system and labor market function at different speeds, that is, the education system develops on the basis of long-term policies and strategies, and the business structure quickly changes according to changing market requirements and technological innovations. The solution to these problems for employers is various additional training programs, such as retraining, short-term vocational training, and etc. It should be noted that the current updating of the educational programs of the TVET is taking place, taking into account the requirements of the employer.

In 2018, first steps were taken to create a system for determining and predicting professional skills. «Atlas of New professions» (international project, Russia), BTS Digital (Kazakhstan, implementation of the project in Kazakhstan) and Eurasian Group (ERG) signed a memorandum of cooperation in the development of Atlas of new professions in Kazakhstan (Atlas). In addition, Atlas will become one of the advanced tools of professional orientation, helping to understand future trends in the labor market and to identify the specialties and skills that will become relevant or appear in the next decade. Atlas's methodology is based on the Skills Technology Foresight, developed in 2014 by the International Labor Organization, the Agency for Strategic initiatives and the Moscow School of Management Skolkovo.

ERG has ordered atlas of proorientation for mining and metallurgical industry, that is why first of all the Atlas will include key branches of development of Kazakhstan: Agriculture, oil and gas, mining and mining industry, machine building, education and health care. The Atlas will allow to increase the relevance of educational services provided by the TVET system, to increase the openness of the sphere of professional education

On the question of recognition of foreign qualifications, the country has a center of the Bologna process and academic mobility, which conducts a procedure for confirming or recognizing foreign qualifications. This procedure is carried out by the Center in accordance with the Rules for Recognition and Nostrification of Education Documents<sup>12</sup>, where it gives an expert evaluation and decision on recognition of the document on education in the appropriate level of education and direction of training (specialties, qualifications, professions) with a recommendation.

There is no provision for industry associations and employers to confirm informal and informal training or recognition of foreign qualifications, including those of migrants and refugees.

### B.1.8 Supporting migrants and refugees through VET

The country provides State support for migrants, including oralmans<sup>13</sup> to receive vocational education. When entering colleges or HEI for oralmans, a quota defined by the Government of RK is provided.

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<sup>12</sup> Order of the Minister of Education and Science of the RK, January 10, 2008 № 8. Registered in the Ministry of Justice of the RK on February 14, 2008 №5135.

<sup>13</sup> Oralmans are foreigners or persons of Kazakh nationality who do not have citizenship at the time of gaining state sovereignty by Kazakhstan and who came to Kazakhstan in accordance with the legislation of the RK for permanent residence.

## B.2: Entrepreneurial learning and entrepreneurship

### Identification of issues

#### B.2.1 Job creation and VET

Since 2017, in the country's colleges, a course on the development of entrepreneurial skills for students from 20 to 36 hours at the expense of optional ones has been introduced into the educational process. But the development of entrepreneurial skills among young people is not a document at the national level.

According to the analyzes of focus groups conducted under the TRP 2018, this course is conducted by teachers of economics, law, history and teachers of special disciplines. The optional course would have a significant effect if the watch were run by entrepreneurs who are doing their business. In addition, there is not enough training material, manuals and evaluation materials to support this course.

*«In the classes we learned to create a business plan. Teachers explain well, meet with entrepreneurs who told us about their success stories. But there are no books on this course, all information is taken from the Internet. I would like to have more practice and meetings with entrepreneurs. The subject is necessary and interesting for us. It would be good if the course was run by entrepreneurs»*

*Source: Focus groups with students.*

*«In order to teach the course «The Basis of entrepreneurial activity» it is necessary to attract employers and entrepreneurs. If the student owns entrepreneurial skills, he will be in demand in the labor market and less unemployed»*

*Source: Focus groups with employers*

Statistics show that the number of self-employed workers with TVET increases every year. In 2018, compared to 2014, the number of self-employed increased by 11% (Figure 11).

Data on self-employment and business creation by the TVET graduates are monitored at the regional level by DCESP then they flow to the SC MNE. However, the data provided do not give a clear picture of the number of graduates of the reporting year who opened their case, and it is also unclear who is employer and who is self-employed.

**Figure 11. The number of self-employed workers with TVET, people**



### Description of policies

#### B.2.2 VET policies to promote entrepreneurship



Since 2017 all colleges have implemented a course of entrepreneurship, but at the state level there is no framework document for the development of entrepreneurial skills. It will allow to develop a working program which teachers can use in drawing up a calendar-thematic plan. To solve this problem, regional EMC and methodological offices at the DE of regions and cities developed a program to create conditions for the development of entrepreneurial skills among college students.

Holding «Kasipkor» conducts annually training courses for pedagogical workers on the topic «Development of the system of entrepreneurial activity and financial and legal literacy in organizations of TVET RK». In 2018, 168 teachers and leaders were trained.

For the first time in the country in 2018, the regional championship of WS on the competence «Development of entrepreneurial skills» was held. The mass media are systematically promoting youth entrepreneurship, business incubators, youth entrepreneurship development centers are being established in many colleges, and meetings with young successful people are being organized.

### III. Summary and analytical conclusions

**First challenge.** Labor market dissatisfaction with the quality of training with TVET

**Factors on the first challenge:** The wear and obsolescence of MTB; inflexible educational programs; weak employers' involvement in the development of TVET

**Challenges solutions:** The TVET system was the first to adopt a modular and competent approach to training. Since 2012, the process of developing new and updated educational programs taking into account employers' requirements and standards of WSK has been underway. Colleges have the opportunity to change the content of the modules up to 50% (up to 80% with DT), taking into account employers' requirements. The country is working to establish Competence Centers by industry, which will be equipped with modern, advanced equipment to increase the competitiveness of the TVET in accordance with international standards, raise prestige and ensure the qualitative growth of specialists and their social and professional mobility. It is possible to pay the master-tutor in the amount of 8318 tenge per student (see E.1.2).

**Progress in implementing solutions:** From 2012 to 2018, 74 new EP in priority specialties and 185 qualifications have been developed. By the Decree of the President of the RK, 2019 was declared The Year of Youth. The State is taking measures to conduct The Youth Year, one of which is the implementation of the «Zhas Maman» project, which is aimed at modernizing the infrastructure of colleges.

**Recommendations:** Updating and re-equipping educational and production workshops, college laboratories both at the expense of the state and by attracting investors. Improvement of mechanisms of material stimulation, participation of business in TVET.

**Second challenge.** Higher unemployment rates for citizens with a TVET compared to those with higher education.

**Factors on the second challenge:** The distribution of state orders does not fully take into account the needs of the regional labor market. In the formation of the state order, emphasis is placed on quantitative indicators on professions and qualifications, without taking into account the required competencies and skills necessary for the regional labor market and a specific employer. Lack of awareness among young people of the labor market situation and government initiatives taken. There is no real mechanism in the country to track graduates' employment.

**Solutions of challenges:** In 2018 «Enbek» program was adopted, which includes: - training of personnel with TVET based on the needs of personnel and retraining of labor resources and reduced workers. In 2018, the CHRD developed a medium-term five-year forecast (2018-2022) to determine

the need for personnel, which reflects the growth of employment by occupation, that is, the shortage or excess of human resources both in the republic and in the regions. In order to reduce youth unemployment at the state level, a number of programs have been adopted, such as «Youth Practice», «With diploma to the village» and «Youth Personnel Reserve».

*Progress in implementation:* In 2018 «Enbek» program covers 628 thousand people, of which 60.4% (379, 1 thousand people) are employed.

*Recommendations:* To ensure the effectiveness of career guidance, it is desirable to develop a single system that allows comprehensive career guidance testing to cover school graduates, colleges and adults, to combine databases of educational organizations, employment centers and the center for human resources development in order to coordinate the activities of structural units engaged in career guidance work.

## Building block C: Social environment and individual demand for VET

### C.1: Participation in VET and lifelong learning

#### Identification of issues

##### C.1.1 Participation

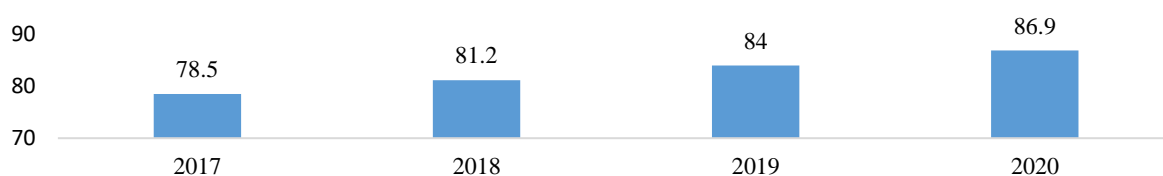
One of the indicators of affordability of TVET is the coverage of young people of typical age. In Kazakhstan, the coverage of young people of typical age (14-24 years) in 2017 was 17%. (Source: NEDB). In the system of TVET, mainly training of middle-level specialists is conducted. The proportion of primary school graduates enrolled in the organization of TVET is no more than 40% (Table 17, unit A).

In 2018 proportion of students in working specialties was only 25% (Source: NEDB). Education in the workplace remains unattractive for young people, even when it is free of charge. One reason is an insufficient career guidance.

The second important indicator of the availability of TVET is the proportion of students in the TVET organizations through the state order of the total number of students in the TVET organizations.

It is planned to annually increase the state order for training personnel on working qualifications at the expense of the local budget. According to the regional akimats and Almaty, Shymkent and Nur-Sultan, by 2020 the state order for workers will increase to 51%. In 2016, 49.9% of the total contingent was enrolled in the TVET at the expense of the state order, and in 2018 - 56.4% (Figure 12).

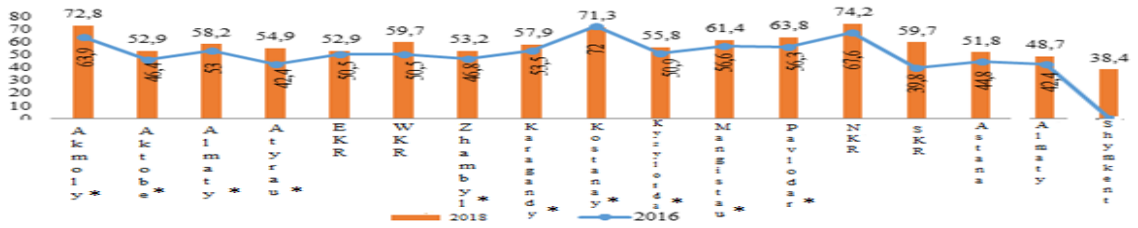
**Figure 12. State order for training of personnel by working qualifications, in thousand people**



Source: LEB

Thus, since the last round of TP this indicator has increased by 6.5% (Source: NEBD). In comparison with 2016 in all regions, except the Kostanay region, there is an increase in the proportion of students at the expense of the budget (Figure 13).

**Figure 13. Proportion of students on the state order in the breakdown of regions**



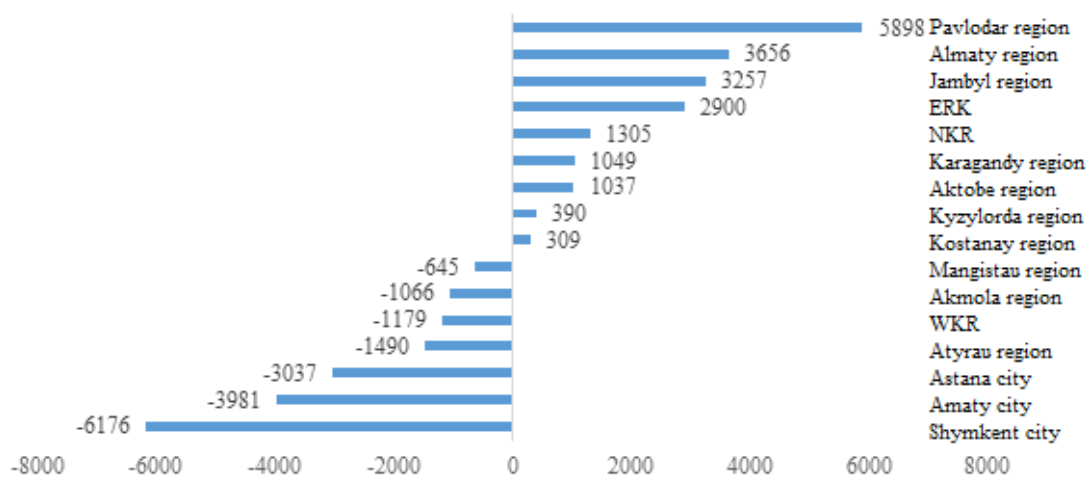
In colleges of Kazakhstan there is a surplus of student places in rural colleges and a deficit in city colleges. There is a shortage of student places in colleges of cities of republican importance, as well as in the west of the country. The surplus of student places in rural colleges is observed throughout the republic, especially a large surplus in the Pavlodar region and in the southern regions of the country. For example, if we consider the content of colleges with a contingent of up to 200 people, it is observed that there are 8 rural colleges in the WKR and the content is 41%, in the Atyrau region the content of 3 rural colleges is 40%, in the Zhambyl region the content is 39% (Figure 17).

**Table 17. The content of colleges with a contingent of up to 200 people**

region	amount of colleges	City	village	occupancy, %
Atyrau	3	0	3	40
EKR	11	3	8	41
Zhambyl	4	1	3	39
Pavlodar	10	2	8	52

Source: MES

**Figure 14. Deficit and surplus of student places in colleges of Kazakhstan for 2018**



Source: MES

The reasons for this situation are that rural colleges provide training in unclaimed specialties, as well as a high level of internal migration from villages to cities, especially to cities of republican significance (Table 14).

One sign of the availability of the TVET is the provision of dormitories. In the TVET for the 2018-2019 academic year there are 439 dormitories, of which 401 are own, 38 are rented. In rural areas, the availability of dormitories is 91.5%. In urban colleges, there is a shortage of places in hostels due to high internal migration from villages to cities (Table 18).

**Table 18. Provision of dormitories to college students from 2013 to 2019**

years	dormitory provision	dormitory insecurity
2013-2014 academic year	71,9	29,1
2015-2016 academic year	72,7	27,3
2018-2019 academic year	74	26

Source: MES

To enter the college under the TVET programs providing for the training of mid-level specialists, applicants pass entrance exams and for programs that include the training of qualified workers, they are interviewed. Admission to college is done on a competitive basis based on the results of exams and interviews. However, upon admission to college, there are no benefits for graduates of schools who have completed basic school «excellent»; the procedure for admission to college is not automated. The number of applications for one place is not centrally monitored.

In Kazakhstan, there is no data related to the socio-economic status of students and its impact on education in schools and colleges. According to focus groups in 2017, about two-thirds of college students come from large, low-income families and from families with low living wages. Some of these students study in groups on a paid basis without financial support from the state (scholarship, etc.).

Students entering colleges for middle-level and apply for a state grant, pass entrance examinations and enroll in these examinations. Rural students are more likely to have lower socioeconomic status than urban students and lower learning outcomes, and therefore less likely to be enrolled in college. Thus, the system of state grants for the financing of TVET is not oriented to account for the socio-economic status of students

### C.1.2 TVET opportunities for vulnerable and marginalised groups

Article 68 of the Law of the RK «On Housing Relations» defines categories of citizens belonging to socially vulnerable group<sup>14</sup>: Disabled persons, participants of the Great Patriotic War and persons equated to them; disabled persons 1 and 2 groups; families having or raising children with disabilities; persons suffering from severe forms of some chronic diseases listed in the list of diseases approved by the Government; pensioners by age; orphans and children left without parental care, who have not reached 29 years, lost their parents before the age of majority; oralmans; persons deprived of their homes as a result of environmental disasters, natural and technological emergencies; mothers with many children, families of persons who died (killed) in the performance of state or public duties, military service, in the preparation or carrying out of a flight to outer space, in the rescue of human life, in the protection of the law and order; incomplete families.

Socio-vulnerable sectors of the population in Kazakhstan are defined by MLSP, MH and MES. The existing social protection system also includes access to vocational education by this category of persons.

<sup>14</sup> The Law of RK «On Housing Relations» dated April 16, 1997, № 94.

According to the SCSE «the working curricula and curricula of educational organizations can completely differ from the typical curricula and programs in cases: Training of specialists from among persons with special educational needs»<sup>15</sup>.

Most often, the process of teaching children with the SEN ends with a school. In 2018, 2928 students with the SEN were enrolled in the country's colleges, 40.5% are female students. The largest number students with visual impairment - 23.8%, hearing impairment - 23.5%, with mental retardation - 13.5% and with musculoskeletal disorders - 9.8%. The proportion of persons with SEN is 0.6% of the number of students, while the quota of admission is 1%.

Most often, the process of teaching children with SEN ends with a school. In 2018, 2,928 students with SEN were enrolled in the country's colleges, 40.5% are female students. The largest number students with visual impairment - 23.8%, hearing impairment - 23.5%, with mental retardation - 13.5% and with musculoskeletal disorders - 9.8%. The proportion of people with SEN is 0.6% of the number of students, while the quota of admission is 1%.

Orphans and children deprived of parental care (DPC) are particularly vulnerable to the occupation of a future quality of life. In 2018, 6,542 orphans and DPC students were educated in colleges in Kazakhstan, including 2,862 (43.7%) of the female gender (*Source: SC MNE*).

In 2018 722 students (of which 58.6% are female) of Kazakh nationality, who are not citizens of the RK, were enrolled in colleges in Kazakhstan, which is 0.15%. In comparison with 2014, the proportion increased by 0.03%. (*Source SC MNE*).

According to the RK statistics in 2017, 46% of the total children's population of the RK lived in rural areas. Children living in remote communities are considered vulnerable because they have to live in a dormitory, which increases costs, or spend extra time and money on travel to the college. Children from poor families are children, living in families with income is below the subsistence minimum per family member.

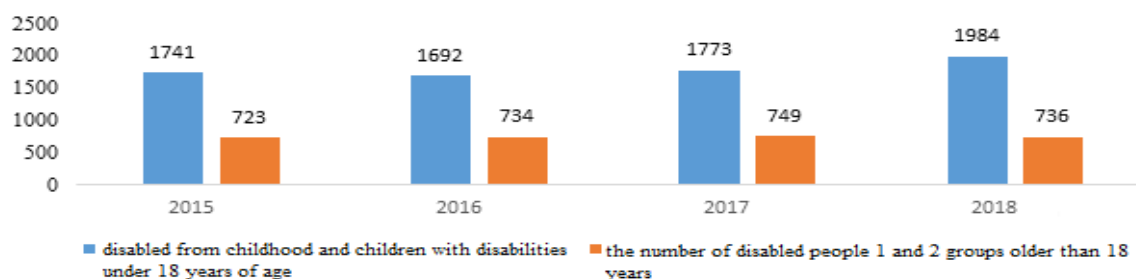
According to the MES, every year from 20 to 30 thousand graduates of schools of 9 and 11 grades remain uneducated. In many ways, this is due to the lack of opportunity to pay for training. These young people are forced to seek unskilled work without any specialty. Some of them join the ranks of NEET youth, as they cannot find a job. In 2017, among the 11th grade graduates, 24 thousand people or 19% did not continue their education, 16 thousand people initially enrolled did not complete their education and dropped out, that is, were left without qualifications. Thus, the proportion of NEET youth in the 1st quarter of 2018 amounted to 9% in Kazakhstan. (*Source: SC MNE*). The project «Free TVET» will allow people to get an education, and employers will receive qualified specialists.

Admission of persons with SEN in colleges since 2015 increased by 10.4% and in 2018 amounted to 2720 people, of which 40% of the female sex (*Figure 15*).

**Figure 15. Dynamics of number of persons with SEN studying in the TVET, people**

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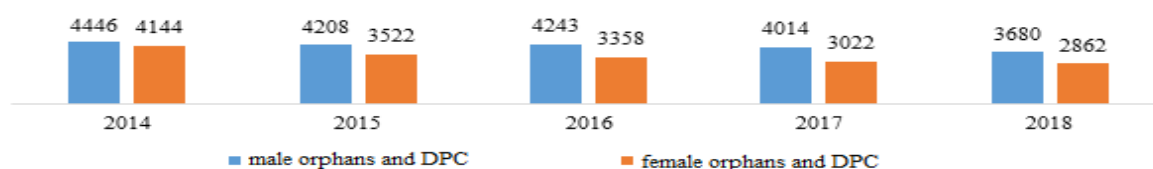
<sup>15</sup> Decree of the Government of the RK dated August 15 2017, № 484 «On Amendments and Additions to the Decree of the Government of the RK «On the Approval of State Compulsory Educational Standards of Corresponding Education Levels» dated August 23 2012 №1080».



Higher scholarship in the colleges is entitled to visually disabled and hearing disabled (75%), students equal in accordance with the Law of the RK «On benefits and social protection of participants, disabled people of the Great Patriotic War and persons equal to them» on privileges and guarantees to disabled war (50%), students from the number of orphans, children of DPC and under the care of citizens (30%), students having according to the results of the examination session only «excellent» mark. (15%).

The number of orphans and DPC in 2018 decreased by 24% compared to 2014 (Figure 16).

**Figure 16. Number of orphans and DPC in colleges**



Source: NEDB

For students from large and low-income families, free meals and travel are organized at the country's colleges with the help of local budget funds.

One of the problems in training people with the SEN is the lack of personnel. Current DGRK №77 from 30 January 2008 does not have full-time units to ensure equal access to education for all SEN students and individual opportunities. Only in 9 colleges work surdoteachers (13 people), in no college there are typhloteachers, oligophrenopedagogues and other necessary specialists<sup>16</sup>.

According to the site «Interactive accessibility map», the educational and methodological support of the educational process of persons with SEN has certain problems. In total, 4 colleges (0.6%) have special training programs, 7 colleges (1%) have special educational and methodical manuals and only 1 college special educational literature (Source: Interactive accessibility map).

Also, the Standard rules for admission to colleges do not specify the conditions for the entrance examinations for persons with SEN. Therefore, it is necessary to create accessible conditions for those with the SEN in the entrance examinations.

<sup>16</sup> Resolution of the Government of the Republic of Kazakhstan of January 30, 2008 № 77. «On the approval of the Standard states of employees of state educational organizations and the list of posts of pedagogical workers and persons equated with them».



Thus, the creation of conditions for equal access for all citizens to the receipt of qualitative TVET is the strategic task facing the state today.

At present psychological-medical-pedagogical consultations (PMPC), subordinate to the MES and local DE are the key obstacle to the education of children with the SEN in the general education school. The conclusion of the PMPC is in fact a permit to study in a general school. This contravenes the State's obligation to guarantee children with SEN the right to education on an equal footing with others without discrimination. The educational program should not be decided on the basis of a survey of a predominantly medical nature.

The legislation of Kazakhstan also provides for the education of children with SEN at home. Children with disabilities who have been studying at home for a long time may not receive quality education and may not enter college or HEI in the future. The proportion of children with disabilities attending home is 0.3 per cent of the total number of students enrolled in secondary school and has not changed over the past five years (*Table 20*).

**Table 20. Number of disabled children studying at home**

2014 year	2015 year	2016 year	2017 year	2018 year
8429	8422	8495	9413	9663

Source: SC MNE

Kazakhstan has vocational training centers and colleges under correctional facilities. Vocational training of convicts is aimed at accelerating the acquisition of new or changed professional skills. The list of trained professions and specialties is determined by the administration of the institution of the penal system in coordination with LEB<sup>17</sup>. In total, according to the data as of 01.10.2018, there were 22 educational institutions with a total contingent of 2,337 people at the CCES MJ KUI (*Source: MES*). Persons in places of deprivation of liberty receive education in working specialties.

On April 12, 2019, a round table (seminar) was held in Nur - Sultan to discuss the thematic areas of TP. Participants described how TVET promotes youth and adults from socially disadvantaged and marginalized groups. For example, graduates of special schools for mentally retarded children were given only certificates, and as a result 1) this violated the rights of children, 2) they were not taken to college, since the admission rules provided only for admission on the basis of a certificate, 3) There were no forms of certificates for children with SEN who study in a general school inclusively.

Changes have been made to the NLA, the issuance of certificates is provided, not certificates, the difference between these certificates from the certificates of ordinary schools is in a series of certificates<sup>18</sup>. This will allow graduates of special schools to enter TVET and get a profession. But at the same time, the proportion of people with SEN studying in college is practically not increasing (*Table 21*).

**Table 21. Proportion of children with disabilities enrolled in TVET**

2015 year	2016 year	2017 year	2018 year
0,5	0,5	0,5	0,6

Source: SC MNE

Individuals with SEN could not enter colleges, as the changes made will affect graduates from 2018. Among other problems that prevent the increase of people with SEN, there is an ignorance and

<sup>17</sup> «Rules for the organization of the reception of primary, primary secondary, general secondary, technical and professional education of convicts sentenced to imprisonment» approved by the order of the minister of Internal Affairs of the Republic of Kazakhstan №516 of August 18, 2014

<sup>18</sup> Order of the Ministry of Education and Science dated May 16, 2018 №210 «On Amendments and Additions to the Order of the Minister of Education and Science of the RK dated January 28, 2015 №39 «On the approval of the types and forms of documents on the formation of a state standard and Rules for their issue»

psychological lack of readiness of the ITS, low awareness of parents about which colleges in their regions are engaged in inclusive training, lack of specialists, insufficient availability, lack of the NLA in determining the profile by type of disease, weak pro-formational work. The LEB does not organize address work with parents. Educational institutions have the following problems in providing additional support to students with disabilities: Lack of psychological and pedagogical support; persons with SEN need an individual approach; work with parents of children with SEN is not properly organized.

## Description of policies

### C.1.3 Policies to improve VET access and participation

The policy of the state in the field of typolas is aimed at increasing accessibility for all categories of population. For example, in order to reach all those wishing to do the teat, since 2017, Kazakhstan has launched the project «Free TVET». Two mechanisms have been developed for the project: 1) training on working qualifications from local budgets; 2) training within the framework of the Program for the development of productive employment and mass Entrepreneurship for 2017-2021 (provides two measures: Training with TVET and short-term vocational training).

Within the framework of the project «Free TVET» every year the state educational order increases (see C.1.1). Since the program's inception, there has been some decline in both general and youth unemployment (*Table 22*).

**Table 22. The level of total and youth unemployment, %**

Year	2015 year	2016 year	2017 year	2018 year
Unemployment rate	5,1	5,0	4,9	4,9
Youth unemployment rate	4,2	3,8	3,8	3,7

Source: SC MNE

Program also provides short-term professional training of employees from 1 to 6 months on a dual basis. The participants of the courses are young people under the age of 29, unemployed and self-employed. Short-term courses are taught at colleges, training centers, etc. Citizens are provided with scholarships, travel and living.

Every year the state educational order for the training of specialists of working qualification increases (*see Summary and analytical conclusions to this section*).

The next social initiative providing access to the TVET is the state program «Mangilik el zhastary – industriyaga» «Serpin - 2050» (*Table 23*). From January 2018 to the present, the administrator of the project is the Center of the Bologna process and Academic Mobility of the MES RK. In total, during these years, a state educational order for 16,975 seats was allocated from the budget. In this project in the 2017-2018 academic year 22 colleges were involved.

**Table 23. Number of grants allocated under the project «Serpin»**

academic year	number of grants	from them	
		to HEI	to colleges
2014-2015	2050	1050	1000
2015-2016	6200	5000	1200
2016-2017	4212	3162	1050
2017-2018	4513	3793	720
Total	16975	13005	3970

Source: Academic Mobility and the Bologna Process Center of the MES

The mechanism of construction of dormitories for students in need of residence has been determined. According to the MES, with the assistance of the MFA for 2018, 134 sites located on the territory or



near educational organizations are allocated. An interactive map has been developed and is operating taking into account all needs, accessible and working online on the site [fincenter.kz](http://fincenter.kz). To begin construction of new student dormitories for at least 75 thousand places until 2022<sup>19</sup>. It is expected that universities, colleges, and construction companies will be built for students themselves on the terms of public-private partnership (PPP) (Source: *Fincenter.kz*.)

Normative documents that regulate the introduction of remote technologies in the educational process are the SPESD and the Road Map «Digital Kazakhstan». At present, the demand for distance education is very high, since this type of education provides an opportunity to receive education regardless of place of residence, health status and other factors impeding traditional education.

#### C.1.4 Promoting VET access and participation for vulnerable and marginalised groups

In 2016 the RK ratified the Convention on Combating Discrimination in Education (*adopted on December 14, 1960 by the General Conference of the UNO*), which establishes the principle of equal access to education and training for all categories of the population. Moreover, in order to ensure the availability of education, including the level of TVET, Kazakhstan signed the Dakar Declaration. Following the policy of the Dakar Framework of Action (DFA), the solution of problems related to the expansion of access to quality vocational education is one of the priority for the educational system of the RK.

Within the framework of the state program «Enbek» there is a system of short-term vocational training and retraining of unemployed and subsequent assistance in the employment of each trained person. Vocational training is mainly aimed at self-employment in order to raise the chances of finding work.

According to the Law on Population Migration, oralmans are granted certain benefits, compensation including the possibility of receiving education in accordance with the allocated quota for admission to the educational organizations of the TVET, in the amount determined by the Government of the RK.

The State provides full social assistance costs during the period of education: 1) for orphans and DPC children; 2) for children with developmental disabilities, disabled persons and disabled children from childhood; 3) for children in temporary isolation, adaptation and rehabilitation centers<sup>20</sup>.

According to the Law of the RK «On Education» orphans belong to the category of citizens of the RK, who are provided with social assistance during their education in the form of full or partial compensation for the costs of their maintenance. In case of the same indicators during the competition for educational grants, as well as for enrolment in students under the State educational order for training of personnel with technical and professional, orphans are also entitled to priority. Orphans have quotas for admission to education organizations that implement vocational training programmes of the TVET. Orphans and children DPC studying in educational organizations are held on full state support. Orphans and children have the following benefits: 100% transportation from akimat, orphans receive 100 MCI once a year for the purchase of clothes and shoes, children under guardianship - 60 MCI. Between 2014 and 2018, the proportion of orphans and DPC decreased by 24%.

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<sup>19</sup>Address by the President of the Republic of Kazakhstan N.A. Nazarbayev to the people «Five Social Initiatives of the President», March 5, 2018.

<sup>20</sup> Decree of the Government of the RK dated March 12, 2012 № 320 «On the approval of the sizes, sources, types and Rules for the provision of social assistance to citizens who receive social assistance

One of the measures related to full access to education of people from poor families, orphans and children with poor health is the provision of these categories of students with hot meals during their studies.

To support students with SEN, the MES approved the admission quotas for admission to the organization of the TVET from the approved state order<sup>21</sup>. In order to create equal opportunities for people with SEN, the TVET system introduces an inclusive form of education, integrated training and individual classes. At present, in the educational institutions of the TVET for children with SEN, training is conducted on a simple basis for the development of working qualifications.

In 2018, The Government of the RK adopted the Road Map to ensure the employment and socialization of young people NEET<sup>22</sup>. This map allows working with young people in 8 categories: Unemployed youth, rural youth, youth with disabilities, youth with secondary education, youth with incomes below the subsistence level, educated youth without work experience, young women with young children, and asocial youth. However, the results of this road map are not preliminary data.

### C.1.5 Flexible VET provision in support of participation in VET

Since 2017, in Kazakhstan, within the framework of the project «Free TVET», short-term professional training of workers on a dual basis is carried out (see C.1.2). The proportion of women covered by short-term vocational training is 59% in 2017, 58% in 2018 (Source: SC MNE).

First of all, free education is intended for unemployed and self-employed youth, as well as people who do not have a professional education. As a matter of priority, participants are formed from the number of graduates of 9-11 grades, persons not admitted to educational institutions looking for work, from among those in difficult life situation and members of low-income families, as well as children of orphanages and boarding schools, children from large families, orphans and DPC children, disabled persons living in centers for the adaptation of minors.

В 2017 г. на краткосрочных курсах было обучено 71851 чел., в 2018 г. – 41656 чел. Наибольший охват составляют безработные (Таблица 24). In 2017, 71851 people were trained at short-term courses, in 2018 - 41656 people .The largest coverage is unemployed (Table 24).

**Table 24. Short-term vocational training for socially vulnerable categories**

years	Unemployed	Orphans and DPC	Low-income	Disabled	Persons from places of deprivation	Oralmans	TVET graduates	9-nth grade leavers	11-nth grade leavers
2017	62,70%	0,05%	5,89%	2,63%	0,68%	0,10%	1,74%	0,47%	1,27%
2018	71,55%	0,04%	14,37%	3,59%	0,86%	0,07%	1,65%	0,41%	0,89%

<sup>21</sup> *Postanovlenie Pravitel'stva RK ot 28 fevralya 2012 goda № 264 «Ob utverzhdenii razmerov kvoty priema pri postupenii na uchebu v organizacii obrazovaniya, realizuyushchie obrazovatel'nye programmy tekhnicheskogo i professional'nogo, poslesrednego i vysshego obrazovaniya* [Decree of the Government of the RK dated February 28, 2012 № 264 «On approval of the size of the admission quota for admission to study at educational organizations that implement educational programs of technical and vocational, post-secondary and higher education]

<sup>22</sup> *Dorozhnaya karta po obespecheniyu zanyatosti i socializacii molodezhi NEET v vozraste ot 18 do 29 let, v tom chisle vypusknikov 2018 goda, utverzhdena postanovleniem Pravitel'stva RK ot 21 sentyabrya 2018 goda № 583* [The roadmap for ensuring employment and socialization of NEET youth aged 18 to 29 years, including graduates of 2018, was approved by the Government of the RK dated September 21, 2018 № 583]

Source: SC MNE

In order to ensure easy access for citizens to the project «Free TVET for all» citizens will be contacted by employment centers at the place of residence and in rural areas by akims of villages, rural districts, cities of regional significance. Employment centers provide all services for free (203 employment centers).

In order to ensure that citizens have access to short-term vocational training, the State pays a scholarship during the study period for these categories of persons and provides free travel to and from the place of study. Persons who need dormitories are provided with financial assistance for living (reimbursement of housing hire costs). The need for specialties is determined by the local executive bodies (LEB) based on the characteristics and structure of the regional labor market. The program provides for employment of citizens for permanent and temporary jobs in cases of appeal to the employment centers of the population in accordance with the Law of the RK «On Employment of the Population».

Thus, Kazakhstan has a working system for the implementation of the Program for the Development of productive Employment and Mass Entrepreneurship. This system provides easy access for all interested persons to training.

In TVET of Kazakhstan, work has been started on the revision of the structure and content of educational programs from the traditional subject-cycle approach to the formation of training modules aimed at the implementation of certain types of future professional activities (competencies).

On October 31, 2017, by the Order of the MES, model curricula and standard curricula for 141 specialties were approved<sup>23</sup>. The flexibility of these programs will allow you to update or replace individual specific modules when changing the requirements for a specialist. These programs began to be introduced from the 2018-2019 academic year in the country's colleges, regardless of the form of ownership. These programs enable graduates to obtain from one to three working qualifications and the qualification of a mid-level specialist within the framework of one specialty. The modular curriculum is complete modules that are developed for each qualification. These programs give students the opportunity, after mastering the module, to enter the labor market after obtaining certification of qualification.

Thus, the modular programs implemented since the 2018-2019 academic year in the colleges of the country allow to shorten the period of training, separate modules to be used for course training, retraining and advanced training of personnel, to build a flexible trajectory of training for all the TVET students.

The Strategic Development Plan of the RK until 2025 states that one of the fundamental changes for Kazakhstan by 2025 will be the transition from a formalized educational system to a flexible system of continuous improvement of skills and competencies throughout its life.

### C.1.6 Validation of non-formal and informal learning

In recognition of non-formal and spontaneous education significant progress has been made since the previous national round of the TRP. Thus, since 21.02.2019 Law of the RK «On Education» introduced changes related to the recognition of the results of the training of non-formal adults. These regulations create conditions for the development of lifelong learning and lifelong learning. Legislation

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<sup>23</sup> Ob utverzhdanii tipovyh uchebnyh programm i tipovyh uchebnyh planov po special'nostyam tekhnicheskogo i professional'nogo obrazovaniya [Order of the Ministry of Education and Science of October 31, 2017 №553 «On the approval of standard curricula and standard curricula in the specialties of technical and vocational education]

has been adopted to recognize organization<sup>24</sup> providing non-formal education, a list of recognized organizations providing non-formal education and recognition of learning<sup>25</sup> outcomes.

The basis for the modernization of education in the RK is such a concept as «lifelong education».

Thus, in the Law of the RK «On Education» official status of non-formal education is recognized.

However, despite the above measures, in Kazakhstan there is no clear mechanism for recognizing non-formal learning. Recognition of non-formal learning does not affect participation in TVET and does not facilitate student access to TVET. It is not yet possible to obtain professional qualifications in Kazakhstan by confirming informal and spontaneous training.

In the non-formal education sector, many institutions and structures of civil society, non-governmental organizations, cultural institutions, education, such as foundations, libraries, museums, theaters, etc.

Since 2016, the project «Development of labor skills and stimulation of jobs» has started. The project, funded by the World Bank loan, is expected to implement an independent qualification assessment and certification system, with industry employers' associations playing a leading role. Certification centers will evaluate and recognize the learning outcomes of all educational contexts: Formal, informal and information learning.

Until 2020, the project will develop assessment tools for the recognition of non-formal and informal learning, determine the stages, procedures and methodology for the recognition of learning. The basis of the recognition methodology can be standards agreed upon with employers: 1) analysis and assessment, 2) recognition, including methodological rules, the procedure for the commission, etc. 3) certification.

In Kazakhstan, labor migration for the most part continues to be a spontaneous unregulated process with limited opportunities for organized legal employment. In Kazakhstan, there are no mechanisms for certification of professional skills of refugees and labor migrants.

## C.2: Equity and equal opportunity in VET

### Identification of issues

#### C.2.1 Success of learners in VET

On average, over the 5 studied years, the proportion of graduates who received an honors degree is 9.4%. Since the last round of TRP, the proportion has increased slightly by 0.2% (Source: SC MNE).

On average, 72% of graduates receive a degree (qualification) each year, of which the main proportion (92%) receives a fixed level, which allows full professional workability after graduation, but the percentage of graduates receiving a higher level than the established level (6.8%) is very low (Indicator 49).

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<sup>24</sup> *Ob utverzhdenii tipovyh uchebnyh programm i tipovyh uchebnyh planov po special'nostyam tekhnicheskogo i professional'nogo obrazovaniya* [Order of the Minister of Education and Science of the RK dated October 4, 2018 № 537 «On approval of the Rules for the recognition of organizations]

<sup>25</sup> *Ob utverzhdenii Pravil priznaniya rezul'tatov obucheniya, poluchennyh vzroslymi cherez neformal'noe obrazovanie, predstavlyayemoe organizatsiyami, vnesennymi v perechen' priznannyh organizatsij, predstavlyayushchih neformal'noe obrazovanie* [Order of the Minister of Education and Science of the RK dated September 28, 2018 № 508 «On approval of the Rules for the recognition of learning outcomes received by adults through non-formal education provided by organizations included in the list of recognized organizations providing non-formal education]

During the period under study, according to the SC MNE, the proportion of dropouts from TVET organizations decreased by 29%, while the proportion in public colleges decreased by 24% and in private colleges by 33% (*Indicator 46*).

According to the indicator, the level of successful completion of educational institutions by types of VET and programs in Kazakhstan is not maintained at the level of the country. In some regions, however, DE monitors the security of the contingent themselves. Students enrolled in colleges on the basis of grades 9 are not subject to exclusion, as they are obliged to receive general secondary education. Once they have reached the age of 18, they are entitled to be transferred to a correspondence department.

In 2019 NC JSC «Holding «Kasipkor» conducted ranking of colleges of Kazakhstan and 270 colleges (33%) took part in this rating. In the method of college ranking, which was developed by the Holding, there is an indicator «Indicators of safety of the population of students before graduation in specialties». Analysis of 33% of colleges that took part in the rating according to the results of 2017-2018 academic year showed that the level of successful completion is 88% (*Source: NC JSC «Holding» Kasipkor»* ).

A student may be expelled from an educational institution due to transfer to another educational institution; upon the student's request; for non-payment of tuition fees; for violation of training discipline; for violation of the rules of the internal order of the educational institution. The reason for the deduction is recorded individually in the NEDB.

There is no other data on the level of successful graduation, the proportion of students remaining in their second year or dropping out.

The results of the International Database PISA-2015 provide an analysis of levels of education. The indicators of schoolchildren are higher than their peers studying in the TVET system. The difference in the results of the natural-scientific part of the test is 32 points, which corresponds to one year of training (*Source: JSC «IAC» MES*). College enrolment rates are lower than their peers in schools, as the bulk of low-learning pupils enter the country's colleges after finishing 9th grade. Therefore, it is necessary to strengthen the quality of general education training within the framework of college education. This requires professional development of teachers of general education disciplines on individualization of education and subject training.

### C.2.2 VET learners in need of additional learning and training support

In the system, TVET requires additional support for students from low-income, large families, orphans and DPC, disabled children and orphans.

In 2018, there were 6542 (1.3%) orphans and children in the country's colleges, and 2720 (0.56%) disabled children. The proportion of Kazakh students who are not citizens of Kazakhstan is 0.15% (723 persons). Colleges keep records of students from large, low-income families, students in need of support, but there are no official statistics on the country.

College students who study in the educational programs of training skilled workers and are members of families with many children, from families with a low subsistence minimum, the state partially compensates expenses during the period of education<sup>26</sup>.

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26 *Predostavlenie besplatnogo pitaniya ot del'nym kategoriyam grazhdan, a takzhe licam, nahodyashchimsya pod opekoj (popechitel'stvom) i patronatom, obuchayushchimsya i vospitannikam organizacij tekhnicheskogo i professional'nogo, poslesrednego i vysshego obrazovaniya* [Order of the Ministry of Education and Science of August 7, 2017 «On the approval of the standard of public service» Providing free meals to certain categories of

In order to implement measures to prevent social orphans, 635 psychologists, 738 methodologists and 493 educators work in colleges of the country.

For children with musculoskeletal disorders, along with individual means of movement, special keyboards and manipulators are purchased today, for children with hearing impairment - individual hearing aids, sound-amplifying system with microphone, tiflotechnic means.

However, there are difficulties in working with children with SEN, as there is a shortage of specialists in the country's colleges to work with this category of persons. Pedagogical and corrective support for children with SEN requires development. Sign language and sign language interpreters, tiflopedagogues, are required to train persons with hearing and visual impairment. But as practice shows, in colleges of the country, as in schools there is a need for these teachers, as well as a lack of methodological and educational support.

Thus, the introduction of inclusive education in Kazakhstan at all levels of education has a number of unresolved problems: there is no specially trained pedagogical staff; Inadequate material and technical facilities in educational institutions; Physical access barrier; The lack of willingness of parents to teach children with SEN in educational institutions; Strict requirements of the state standard.

All these and other problems are related to the fact that at the state level there are no measures of additional support for socially vulnerable categories of students, young mothers who continue to study at TVET, students with learning difficulties, etc.

## Description of policies

### C.2.3 Measures in support of equity in VET

State ensures equality in obtaining free TVET by citizens of the RK, with the assignment of working qualifications or working qualifications to graduates within the framework of one specialty, as well as on a competitive basis in accordance with the State order of free TVET, if the education of each of these levels is received for the first time by a citizen of the RK, except for education received in military and special educational institutions<sup>27</sup>.

When entering higher education institutions for applicants, the same admission quotas are provided for persons with disabilities, rural youth, orphans and persons of Kazakh nationality who are not citizens of RK, as well as in technical vocational education.

Training groups in colleges are complete in specialties. With a full-time form of study, the number of students in the group should be at least 30. In case of correspondence and evening forms of training at least 15 people. In the course of laboratory and practical classes, it is planned to divide the training group into subgroups of 8 to 13 persons, so that the teacher can pay equal attention to all students and, if necessary, an individual approach<sup>28</sup>.

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citizens, as well as to persons under guardianship and trusteeship, students and pupils of technical, vocational, post-secondary and higher education organizations»]

<sup>27</sup> «On Education» The Law of the Republic of Kazakhstan dated 27 July, 2007 № 319-III (at 21.02.2019)

<sup>28</sup> *Ob utverzhdenii gosudarstvennyh obshcheobyazatel'nyh standartov obrazovaniya vsekh urovnej obrazovaniya*

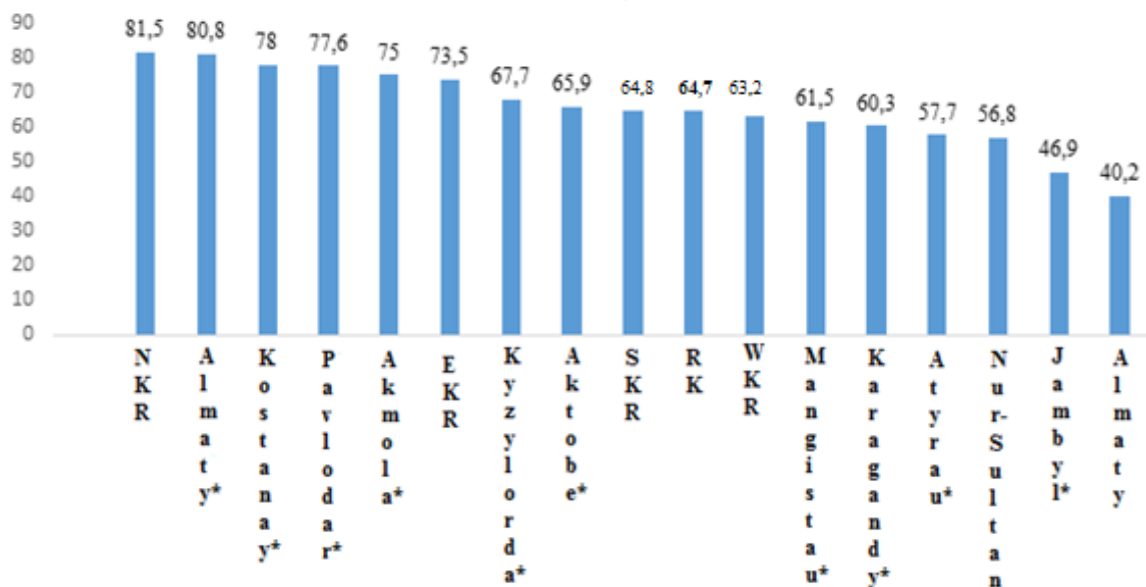
[Order of the Minister of Education and Science of the RK dated October 31, 2018 № 604 [«On approval of state generally binding education standards at all levels of education»]



Implementation of special training programs for training of persons with SEN is provided by specialists accompanying the training process. Special training programmes and individual training plans are developed for persons with SEN, depending on the psychophysical characteristics and capabilities of the students (see C.1.4).

When forming the quantitative composition of groups of students with SEN colleges rely on the model rules of activity of special complexes «boarding school-college» where it is stated, That the occupancy of classes, groups in special complexes «boarding school-college» for children with visual impairment from 8 to 12 children, With hearing impairment from 8 to 10 children, with speech impairment not more than 12 children, With disorders of musculoskeletal system not more than 10 children, with disorders of intelligence from 10 to 12 children, With mental delay no more than 12 children, with emotional and will disorder no more than 10 children<sup>29</sup>.

**Figure 17. Percentage of TVET organizations that have created conditions for inclusive education across regions**



Source: NEDB

According to SPESD, proportion of TVET organizations that have created equal conditions and barrier-free access for students with SEN by 2019 should be 40%. Concept of «equal conditions and barrier – free access» should include both logistical resources and personnel and training resources. According to NOBD, in 2017, out of 817 organizations, TVET 529 (64.7%) created conditions for students with SEN, but colleges on this indicator do not take into account all the above-mentioned conditions.

In terms of regions, there is a significant difference in indicators. The highest proportion of TVET organizations indicating that they created conditions for inclusive education was noted in North

<sup>29</sup> *Ob utverzhdenii Tipovyh pravil deyatel'nosti vidov special'nyh organizacij obrazovaniya* [Order of the Minister of Education and Science of the Republic of Kazakhstan dated February 14, 2017 № 66 «On approval of the Model Rules for the activities of types of special educational organizations».]



Kazakhstan (81.5%) and Almaty regions (80.8%). Their indicators are twice higher than in Almaty (40.2%) and Zhambyl regions<sup>30</sup> (46.9%) (Figure 17).

According to the SCES, TVET organizations can change the content of educational programs for individualization of training. However, focus groups noted difficulties in adapting curricula to individual opportunities of students with SEN. Teachers need appropriate methodological support on this issue.

## C.2.4 Inclusive education and VET

Kazakhstan recognizes the right of persons with disabilities on an equal basis with others to education on the basis of equal opportunities, without discrimination, at all levels and throughout their lives. The development of inclusive education is under constant control of the Government of RK.

Following ratification of the Convention on the Rights of Persons with Disabilities, the Law of the RK «On Education» is supplemented by provisions on respect for the rights of persons with disabilities and at all levels of the education system (article 4, paragraph 28); On the right to priority distribution to work (article 17-1, paragraph 47).

Inclusive education is being consistently introduced, the definition and mechanism of which Kazakhstan has approved by amending the Law of the RK «On Education» (article 1, paragraph 21-7, article 8, paragraph 6, article 56, paragraph 3).

Article 1 is supplemented by subparagraph 21-7, which defines inclusive education. Article 56 is supplemented by paragraph 3 in accordance with Act № 433-V of 03.12.15, which SCES is designed with inclusive education in mind.

Together with the LEB, a set of measures is being implemented to improve the quality of life of children with disabilities in development. These measures are envisaged in the SPESD RK for 2011 - 2020 years, in the strategic plans of the MES, as well as in the Concept of Social Development of RK up to 2030. The MES also approved conceptual approaches to the development of inclusive education in RK and a set of measures for the further development of the system of inclusive education for 2015 - 2020 years.

In the SPESD RK for 2011-2020 states that in order to create conditions for persons with SEN, curricula for specialties will be developed, as well as a list of specialties for students with SEN will be developed.

Strategic Development Plan of the RK until 2025 identifies the initiative «Ensuring accessibility and inclusiveness of education» as one of the initiatives. It is planned to provide psychological and pedagogical support for inclusive education, to create special offices, educational programs of secondary, TVET on demanded working qualifications, as well as to organize advanced training of teachers.

In Concept of Social Development of RK to 2030, one of the priorities is the creation of an inclusive society through the creation of an enabling environment for all vulnerable groups.

Legislative base in the field of inclusive and special education in the RK is the laws: «On the Rights of a Child in the RK», «On ratification of the Convention on the Rights of Persons with Disabilities», «On Social Protection of Persons with Disabilities in the RK», «On Social and Medical-Pedagogical

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<sup>30</sup> Ramka monitoringa inklyuzivnogo obrazovaniya v Respublike Kazahstan [Monitoring framework for inclusive education in the Republic of Kazakhstan], MES, IAC, 2017

Correctional Assistance for Children with Disabilities». In accordance with the law, equal access to education is provided for persons with SEN.

The State fully or partially compensates expenses for the maintenance of children with developmental disabilities, persons with disabilities and persons with disabilities from childhood during their education (article 8, paragraph 4 of the Law of the RK «On Education»).

Persons with visual and hearing disabilities are entitled to an increased State scholarship, the amount of which is determined by the Government of Kazakhstan (article 47, paragraph 7 of the Law of the Republic of Kazakhstan «On Education»).

When entering colleges, an admission quota of 1 per cent is provided for persons with disabilities (article 1, paragraph 8 (26), of the Law of the RK «On Education»).

Currently, persons with disabilities in development are trained in special training programs, for this category of persons in 2018 the Holding developed 20 special training programs.

For example, persons with hearing disabilities in Kazakhstan are trained in special groups in 15 colleges. Occupancy of groups from 7 to 17 people. Persons with visual impairment are trained mainly in regular groups. There are 4 colleges in the Republic where persons with musculoskeletal disorders are trained.

Colleges that train persons with SEN have the right to adapt the model curricula and programmes to the specific characteristics of these persons. The form of conducting the current, intermediate and final state certification can be varied taking into account the individual capabilities of persons with SEN.

In connection with the need to improve the skills of teachers of colleges to work with persons with SEN, the Holding conducted advanced training courses on the topic «Basic aspects and conditions of the process of inclusive training in TVET organizations». There were 242 teachers in these courses.

Previously, in secondary education, graduates of special schools for mentally retarded children were given only certificates and as a result these categories of children could not continue to study in colleges, as admission to college provides for a certificate. This violated and violated the rights of children. In this regard, amendments were made to MES Order № 39 of 28 January 2015 «On approval of types and forms of documents on state-style education and rules for their issuance». The issuance of certificates, which differ from normal ones only by series, is provided. Changes have been made to the model college admission rules, which allow special school graduates to enter colleges.

Due to the shortage of specialists to work with persons with SEN, 400 grants were allocated for training teachers-defectologists on bachelor 's degree in 2018, 100 grants for master 's degree, 30 grants for doctoral studies.

### C.3: Active support to employment

#### Identification of issues

##### C.3.1 Employability of VET graduates

An analysis of the employment of TVET graduates shows that in 2018 the share of employed people was 62.7%, while in 2014 it was 68%. Employment rate decreased by 5.3 % over the five-year period. The proportion of disabled graduates is 16.7%. The remaining 20.6% are employed (they are trained in HEI, colleges, called to military service, are in decree, have left the RK) (Table 24).

**Table 24. Employment rates of 2017 TVET graduates**

number of graduates	employed	enrolled in HEI	entered TVET	have military duty	emigrated	in maternity	unemployed
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				assignments		leave	
141724	88968	10817	9059	4741	487	4032	23620
100%	62,7%	7,6%	6,4%	3,3%	0,3%	2,8%	16,7%

Source: NEDB

According to a study conducted in December 2018 by JSC «CHRD» from the moment of graduation from college to the moment of employment, the average duration of search for work of the graduate was 21 months.

Average salary of all graduates was 61,883 tenge, i.e. less than half (48%) of the average salary in the country. The highest average salary was observed for college graduates from Nur - Sultan (77.1 thousand), Mangystau region (71.5 thousand), Almaty (70.9 thousand) and Atyrau (70.2 thousand) regions. Kyzylorda region (48.1 thousand) became an outsider. According to the «Proportion of working students in the last year of study», the undisputed leaders among the regions were Atyrau region and the city of Nur - Sultan with indicators at 22% and 21% of graduates respectively. The outsider was Kyzylorda region (5%).

Graduates of specialized (mainly medical) colleges are by default in demand in local labour markets. The reasons for the demand of personnel of these colleges are specialization and experience of colleges in specific fields of knowledge, such as medicine, art and culture (*Study «Rating of professional education organizations, JSC «CRTR», 2018»*).

During the rating, 15 groups of specialties were covered.

The least demanded were (*Table 25*)<sup>31</sup>

**Table 26. Least demanded specialties of 2018**

No	specialty	point	causes
1	«Service, economics and management»	13	low level of employment of graduates and the instability of their employment
2	«Agriculture, veterinary Science and Ecology»	14	this industry has a seasonal nature of hiring workers
3	«Law»	15	graduates have the most precarious jobs and the lowest wages

Source: JSC «CHRD»

The main reasons for the lack of employment of TVET graduates are the following:

- requirements of employers about the existence of work experience in the specialty; low salary in a number of specialties (agricultural, medical specialties, services, education);
- lack of a regulatory framework requiring employers to hire graduates;
- in some specialties, the mismatch of the skills of graduates with the requirements of employers.
- there are no clear statistics on the employment and employment of young specialists in order to determine workers not in their specialty and how completely the applications of enterprises for young specialists are satisfied.
- lack of systemic control by the state of the employment of graduates trained in state grants.

In HEI for graduates who studied under the state educational grant in pedagogical, medical and veterinary specialties, the norm of compulsory completion of graduates is introduced.

According to analysts of NCE «Atameken» to the results of the 2018 survey, about 60% of university graduates cannot get a job in their specialty. In December of the same 2018, a chamber published the results of a study of educational programs. It turned out that about 35% of graduates do not work in

31 *Issledovanie «Rejting organizacij professional'nogo obrazovaniya»* [Research «Rating of Vocational Education Organizations»], JSC «Center for Human Resources Development», December 2018.

their specialty, and another 40% were unable to find jobs within a year after graduation. Experts note the lack of demand for HEI graduates in legal specialties, since there is an overabundance of them in the labor market.

According to a study conducted in December 2018 by JSC «CHRD», the total level of employment of graduates of higher education institutions amounted to 66%.

Thus, higher education does not guarantee employment. But at the same time, the unemployed, informally employed by the majority of persons with TVET and secondary education (in 2018, 21% of the unemployed had secondary education, 41.3% had TVET and 28.7% had higher education) (*Source: SC MNE*).

### C.3.2 Economic factors with an impact on transition

One of factors preventing graduates from entering the labour market is the fact that enterprises are more profitable to hire people with experience. During meetings held with employers, it was revealed that employers do not want to hire young professionals because they do not have work experience, as well as employers are not ready to invest in an inexperienced employee, and graduates without work experience find it very difficult to get a job.

Although in Kazakhstan the Center for Labor Resources Development conducts a medium-term forecast of employment by spheres. However, the use of this information to adjust the TVET system is very limited. So, for example, according to electronic labor exchange (<https://www.enbek.kz/ru>) for the III quarter 2018 in labor market lawyers (1510 vacancies), technicians-programmers (706 vacancies), financiers (570 vacancies), economists (558 vacancies) were the most unclaimed, and nurses (3683 vacancies), nurses (the general profile) (2531 vacancies), drivers of cars (2322 vacancies)<sup>32</sup> are the most popular.

In 2018 output for unclaimed professions amounted to 10,6 thousand people, while the excess was already 3,3 thousand people<sup>33</sup>. This means that 3,3 thousand people who cannot find a job in the specialty were joined by another 10.6 thousand. In addition, in 2018 reception in unclaimed professions was carried out, which amounted to 11,2 thousand people and these specialists will enter the labour market in 3-4 years (*Source: NEDB*). These facts suggest that admission to colleges, both public and private education organizations, does not take into account the projected need for personnel. It is safe to say that these graduates will join the ranks of the unemployed and NEET youth.

Another factor that affects the growth of certified unemployment is the large percentage (41.6%) of private TVET institutions. Most private colleges provide training in law, economics, education, and management, which do not require significant material and technical costs. In 2018, out of 75,251 graduates, 34% of graduates released private colleges.

The issue of creation of new jobs is unclear. According to the criterion «accepted workers for newly created jobs» statistics are given only until 2016 (53.6 thousand jobs) (*Source: SC MNE*). If we consider the scheduled number of employed population, we can see that from 2016 to 2018 the number increased by 156, 4 thousand people. Growth should suggest that the economy is recovering and new jobs are emerging. However, the growth is related only to the sphere of services (341.4

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<sup>32</sup> Source: Demand and supply of labor on the electronic labor exchange for the III quarter of 2018. Ministry of Labor and Social Protection of the Population of the RK

<sup>33</sup> Source: Demand and supply of labor on the electronic labor exchange for the III quarter of 2018. Ministry of Labor and Social Protection of the Population of the RK

thousand jobs), in the spheres of agriculture, forestry and fisheries (-158, 8 thousand jobs) and in industry and construction (-26, 3 thousand jobs) there is a decrease (*Source: SC MNE*).

There is little or no graduate tracking system that could provide employment data directly from recent graduates. Lack of quantitative and qualitative information means that the problems of transition from education to employment are not fully understood, and the situation is not properly assessed, hence there is no adequate solution to the problems. Thus, decline in employment in the real sector of the economy indicates a decline in the country's industry and agriculture and that there are insufficient new jobs in these sectors.

### Description of policies

#### C.3.3 Overview of policies in support of employability and transition to employment

Work is being done in Kazakhstan to increase the employment of TVET graduates. All colleges have structural units and responsible persons who deal with all types of internships and employment of graduates. To improve the practical orientation of education in the country's colleges, DT is introduced.

There are career development centers in colleges to promote the employment of college students and college graduates and to interact with employers. These centers cooperate with enterprises and organizations; assist in organizing internships and practices; interact with local authorities, including the territorial bodies of the public employment service, who's interested in improving the situation of graduates in the job market. Employees of career centers conduct explanatory work with students, and provide feedback to college graduates.

One of the effective ways to find work is a job fair. Applicants are given the opportunity to personally communicate with recruitment managers, and possibly with the management of organizations. Plus, applicants can submit their resumes to hundreds of companies at once. Vacancy fairs are held by the employment centers, the Center for Youth Initiatives with the participation of employers, National and regional Chamber of Entrepreneurs.

Some colleges, together with employers, conduct a survey of graduates with a view to their further employment. The estimated employment and employment of graduates is determined.

For job search and selection of staff in Kazakhstan, a unified online platform - the electronic labor exchange (<https://www.enbek.kz/ru>), was launched in pilot mode in 2017. And since 2018 it has been working in full mode. This is a single digital employment platform in which any employer can publish available vacancies, and the applicant can submit his resume, all services are provided free of charge without visiting employment centers. It is a very convenient single digital platform for enterprises and employers, for workers, to look for work and to look for a worker.

For the III quarter of 2018, the electronic labor exchange has 255843 vacancies and 121557 resumes.

Statewide programs have been repeatedly adopted to address youth unemployment and employment: «Productive Employment and Mass Entrepreneurship Program for 2017–2021», «Youth Personnel Reserve», «Employment 2020» program, «Road map of business», «With a diploma to the village», «Mangilik el zhastary - industryga «- «Serpin «, «Youth practice».

The state, within the framework of the program of productive employment and mass entrepreneurship for 2017-2021, provides not only short-term vocational training (from 1 month to 6 months), but also training the basics of entrepreneurship. Short-term training is designed for the young and middle-aged people to acquire work experience, and provide productive employment. A key indicator of the program is post-training employment. As of June 1, 2018, 23 thousand people (plan for 2018 - 37.2 thousand people) were sent to short-term courses (*the official Internet resource of the MLSP*).

Through the electronic labor exchange, 530 thousand job seekers were employed (392 thousand for permanent jobs and 137 thousand for temporary workers).

In Kazakhstan, the Law «On Employment of the Population» was adopted, to regulate legal, organizational and economic relations in the sphere of employment. The Employment Act contains the following tools: youth practice (for the purpose of acquiring an initial experience in the profession), social work (for the employment of unemployed persons with subsidies for their wages through the Employment Center), public works, the establishment of quotas for jobs, the promotion of entrepreneurship, the promotion of voluntary resettlement, and the assignment of vocational training.

An important role in ensuring employment is played by the established duties of employers, in particular: 1) to send information on the availability of free jobs to the Employment Center(EC) ; 2) to fulfill the established quota for the employment of individual categories of citizens;3) to provide information to the authorized body on employment of foreigners or stateless persons.

The full performance of the employer's obligations is monitored by the relevant government authorities.

### C.3.4 Career guidance

Career guidance is an important tool for ensuring a more effective transition of young people to work and is carried out at all levels of formal education.

In Kazakhstan, vocational guidance work is carried out by schools, career centers and career guidance colleges, NCE and regional chambers of entrepreneurs, youth policy institutes, employment centers, etc. But there is no unified coordinated strategy, since there is no single agency for career guidance in the RK, where all interested stakeholders would be present.

Responsibility for the organization of career guidance among students lies with the MES. According to the Standard Qualification Characteristics of Teaching Staff Positions, career guidance is the job of the school's deputy principal. Schools also lack a systematic approach to career guidance, have not developed methods, and have no practice of systematic vocational guidance for high school students. TVET organizations carry out career guidance in the following areas: work with students in 9th and 11th grades of general schools; interaction with employers; work with parents; conducting workshops, exhibitions, excursions, etc.

The involvement of employers in this work is important in the vocational training of colleges. Colleges work closely with partner enterprises. There are excursions of school kids to enterprises, meetings with successful graduates of their profession, also master classes are held.

An important role in career guidance is working with parents of schoolchildren. This is a psychological and pedagogical education of parents on the professional orientation of young people.

In the regions, the Chamber of Entrepreneurs conducts wide pro-educational work, information stands about the best enterprises of the region are installed in general education schools, pro-educational events with the participation of schoolchildren and representatives of employers are held. For example, in Pavlodar, since 2015, a cluster of pre-profile and profile training of students has been operating, which is a good example of effective interaction. This cluster includes kindergartens, schools, colleges, universities, enterprises and the Chamber of Entrepreneurs of Pavlodar region.

Employment centers provides social professional guidance services in Kazakhstan for job seekers; unemployed persons; self-employed; oralmans; students, high school students.

In Kazakhstan, as part of a World Bank loan «Promoting Productive Innovation», a unified information system for career guidance, analysis and forecasting of the needs of specialties – bagdar.kz has been developed. The goal is to help young people to be aware of the choice of the future profession depending on psychological tendencies.

This system presents a list of educational organizations (TVET, HEI), specialties, vacancies, resumes, and also provides the opportunity to pass tests. Comprehensive career guidance testing can be



performed by schoolchildren, graduates and adults. Thus, this system allows to cover all interested groups of the population: pupils of grades 5-8 vocational education, graduates of grades 9-11 vocational training and professional selection, and adults - re-profiling and re-education. After passing the test, you can get acquainted with the profession, its profession diagram, there is the opportunity to watch a video interview with a representative of this profession.

But despite the wide participation in the vocational work of concerned parties, Kazakhstan lacks a system, effective model of vocational work; there is no early vocational guidance from the 5th grades. Thus, work on vocational guidance is being carried out in Kazakhstan, however, the effectiveness of career guidance at the school and TVET levels has not been evaluated.

### III. Summary and analytical conclusions

**First challenge.** The TVET system and, in particular, training in working specialties remains unattractive for young people.

*Factors on first challenge:* The leading factor is the society's perception of the lack of prestige of the TVET, associated with unsystematic career guidance work. The next factor is the lower level of wages of the majority of employees with technical and professional education compared with graduates of HEI. The third factor is the share of employment of graduates with a TVET lower than graduates of HEI (see C.3.1).

*Challenge solutions:* In Kazakhstan, since 2017, the implementation of the project «Free TVET for All» has been started. In order to implement the 77 steps «Training of qualified personnel in 10 leading colleges and 10 universities for six key sectors of the economy with the subsequent dissemination of experience in other educational institutions of the country», the Plan of the nation «100 concrete steps» MES defined 16 base colleges. Since 2019, the «Zhas Maman» program has been launched, which is aimed at improving the TVET system, it will be implemented on the basis of the «100/200» principle, i.e. training of specialists will be carried out in the 100 most demanded professions on the basis of 200 modernized educational institutions: universities (20) and colleges (180).

*Progress in implementing solutions:* In the regions, systematic work is carried out to popularize the TVET. Integrated work has been organized and is being carried out by the regional educational institutions: youth events, competitions, round tables, excursions to colleges and enterprises, professional skills competitions, Open Days, meetings with school graduates and their parents with social partners, regional «WS International» championships, «Skills for geeks», «IT-bilim beru bolashakka kadam» and others.

In schools and colleges, there are professional offices where, in order to identify the preferences of students when choosing a profession, questionnaires are regularly conducted for graduates of grades 9 and 11 of schools, career guidance work with the parent community, and class hours with the participation of parents. In all schools, stands for career counseling are designed, and in colleges about the enterprises of the partners of the educational institution.

*Recommendations:* In order to increase the share of students studying in working specialties, a detailed analysis of the correspondence of training (by region) to the needs of the economic sectors is necessary. It is necessary to systematize work on career guidance, which will motivate young people to obtain work skills. To work out the issue of creating a system of early career guidance. To strengthen the career guidance of schoolchildren through holding forums, implementing the project «Top 100 Best Students of RK Colleges», developing and popularizing the Zhasskills movement.

**The second challenge.** Limited access to TVET for rural youth, representatives of socially vulnerable and marginalized groups.

*Factors on the second challenge:* In rural areas, TVET organizations cannot offer demanded specialties. To date, there are students who need dormitories. The state order cannot meet the needs



of all those who want it, and the cost of training for socially unprotected and marginalized groups is probably high.

Challenge solutions: In the 2017-2018 academic year, within the framework of the Project «F TVET for All», 94,810 thousand people were accepted at the expense of local budgets for state orders. Within the framework of the «Serpín-2050» project, a state educational order for 720 places was placed in 22 colleges in the required specialties of TVET. In the academic year 2018-2019, TVET organizations accepted only 155432, of which 98 505 were commissioned by the state educational order or 63.4%, of which more than 20 thousand people under the Program of Productive Employment and Mass Entrepreneurship. The mechanism for the construction of dormitories according to the model of public-private partnership with the participation of developers and the state is determined.

Progress in implementing solutions: For 2018, 134 plots were allocated. The state plans to allocate 118 billion tenge over ten years for the construction of dormitories. In 2019, 5,000 new locations will be built. Until 2022, it is planned to build student dormitories for at least 75 thousand places.

Recommendations: To develop a State program following the example of «Serpín» for socially unprotected and marginalized groups in order to create the possibility of free education in cities and regional centers in popular specialties with the provision of a student dormitory.

**The third challenge.** Lack of systematic approach to the implementation of inclusive education in Kazakhstan: Lack of specially trained pedagogical staff, insufficient educational-methodical, material-technical and personnel support incomplete participation and inconsistency of public and private sectors, insufficient financing and resources.

Factors on third challenge: The factors that determine these challenges are the introduction of inclusive education without wide public discussion, and therefore, both parents and teachers were not ready for radical changes. While studying at school, many children with SEN were in the so-called home schooling (see C.1.2). Upon admission to college, these children did not have adaptation skills in society. Parents feared for their children, as they had previously been at home schooling. The lack of specially trained teaching staff does not allow to carry out an individual approach to students. The factors that caused the problems of inclusive education is that at the national level, the first steps have been taken since 2017. And in this regard, there was no training of pedagogical personnel, in the organizations of the TVET there were no conditions for physical access of students with the SEN, programs for these categories of students were not revised.

Challenge solutions: By the Decree of the Government of the RK dated from March 31, 2017 № 150, positions of a sign language interpreter, a methodologist for inclusive education, a medical psychologist, and a defectologist were included in the standard staff of employees of state educational organizations. For children with the SEN since 2018, certificates have been issued, which differ from the usual series only, while previously these children were given certificates. The Law of the RK «On Employment of the Population» of April 6, 2016 provides for the establishment of a quota for the employment of disabled people in the amount of two to four percent of the number of jobs. Since 2018, the law has provided for a provision to subsidize the costs of employers creating special jobs for the employment of disabled people.

Progress in implementing solutions: In 2018, 20 special training programs for TVET specialties were developed, methodological recommendations for the development of special training programs for people with SEN were prepared. In working curricula for individuals with SEN, up to 15% of the amount of study time is allocated to individual training. On the topic «Main aspects and conditions of the inclusive education process in TVET organizations», 242 TVET teachers were trained in 2017 and 2018.

Recommendations: Principle of inclusion requires early detection of children and early corrective pedagogical support for children with disabilities. To further develop inclusive education, review the current system of financing education. Unified information system is needed at the national level,

which stores the results of the assessment of special needs (medical, educational, social) of people with SEN and based on these results; state budget programs for social and medical-pedagogical assistance of these people should be planned. In pedagogical colleges and universities it is necessary to include in the curriculum of all pedagogical specialties special subjects in which they would teach skills and techniques for working with children with SEN. It is essential to monitor and evaluate the effectiveness of inclusive education through uniform and agreed qualitative and quantitative indicators and procedures. Increase the share of colleges that have created equal conditions and barrier-free access for students with SEN.

**Fourth challenge:** The procedure for forming and distributing state orders in organizations is imperfect.

*Factors for the fourth challenge:* Distribution of state orders does not fully take into account the needs of the regional labor market. When forming a state order, the focus is on quantitative indicators for professions and qualifications, without taking into account the required competencies and skills needed for the regional labor market and a specific employer. Insufficient awareness of the youth about the situation of the labor market, adopted state initiatives. There is no real mechanism for tracking the employment of graduates in the country.

*Challenge solutions:* orders of the Ministry of education and science No. 102 of January 29 were adopted at the national level. 2016. rules for placing the state order for training depot number 397 dated August 7, 2017 on approval of the state service, acceptance of documents. competition for placing orders, training and other regulatory documents.

*Progress in implementing solutions:* Solutions for accounting and demanded competencies and skills required for the original and industry-specific labor market are being developed, from which the company uses these forecasts when forming a state order-point to improve regulatory documents related to orders.

*Recommendations:* Executive bodies to increase efficiency of work on formation of money by the state of the order by development medium and long-term monitoring, organization and career path of graduates.

**Fourth challenge:** Graduates of TVET organizations experience difficulties with finding a job, including those who have been studied by state order. According to the data of JSC «IAC» 49% of graduates are employed not in the specialty (Source: JSC «IAC» MES).

*Factors:* Overproduction of personnel in unclaimed professions (lawyers, computer programmers, financiers, economists). Insufficient creation of new jobs in industry and agriculture. Employers do not want to spend time, effort, and money to train young professionals, and therefore do not accept them for work. Not all regions of the country have certification centers to assess the qualifications of college graduates. According to the information of NCE «Atameken» in 2018 there are 33 certification centers (Almaty – 15, NKR– 8, Nur-Sultan – 6, Pavlodar region – 1, EKR – 1, Aktobe – 1, Karaganda region – 1).

*Challenge solutions:* Statewide programs have been repeatedly adopted to address youth unemployment and employment: «Productive Employment and Mass Entrepreneurship Program for 2017–2021», «Youth Personnel Reserve», «Employment 2020» program, «Road map of business», «With a diploma to the village», «Mangilik el zhastary – industryaga» «Serpın» . Monitoring the employment of graduates is carried out by the availability of pension contributions.

*Progress:* In 2018, 40.2 thousand people were enrolled in professional and technical training; short-term courses - 41.5 thousand people. Among those who completed short-term vocational training, 23.4 thousand people or 68% are employed in permanent jobs; 14 thousand people received microcredits (12.8 thousand in the countryside (91%) in cities - 1.2 thousand people (9%); 129 thousand people are employed for subsidized jobs (22 thousand people for social jobs, 27 thousand

for youth practice, 80 thousand for community service 1,733 families were resettled, of which 6,367 people or 100% of the plan. Through the electronic labor exchange, 530 thousand job seekers were employed (392 thousand for permanent jobs and 137 thousand for temporary workers).

*Recommendations:* It is necessary to introduce an automated system for tracking graduate employment, including by profession, to systematize information and eliminate subjectivity. Real active involvement of employers in the development of educational programs and in the educational process is necessary.

## Building block D: Internal efficiency and operation of the VET system

### I. Thematic questions

#### D.1: Teaching and learning environment

##### Identification of issues

##### D.1.1 Teaching and learning methods, including work-based learning

Effectiveness of the TVET system, increasing its quality to a world level, the demand for graduates in the labor market depends on the methods of teaching and learning used. In the TVET system, along with traditional, innovative teaching methods that enhance the student's role are used. A personality-oriented approach is being implemented, the technology of an individual student learning path is being introduced. The concept of «individual educational trajectory» has been introduced into legal system.

Use of ICT allows you to individualize the learning process; the use of electronic textbooks and lectures significantly expands the student's capabilities. The use of ICT in colleges meets a number of problems: not enough electronic textbooks in the state language, there is no single database of electronic educational resources in the specialties of the TVET, low speed of the Internet. In 2018, 327 ETS of state colleges on the implementation of IT technologies were trained.

In recent years, integrated learning technologies have been introduced. For example, the CLIL methodology has been recognized in connection with the transition to trilingual education and the introduction of professional English in the educational process. For 2018, the share of teachers who teach special subjects in English is only 0.9%. The CLIL technique allows you to expand the scope of the English language in the teaching of special disciplines in TVET, based on professional content.

Active methods used by the colleges' ETS are the method of problem-search learning and the technology of level differentiation of students.

Workplace Training (WT) is one of the main methods of training professional competencies. The most widely used type of WT is the production practice, which is 40% of the total volume of training hours. The format of preparation and conduct of the students' production practice at the enterprises is regulated by internal normative legal acts and is regulated by the contract for conducting the practice, which is between the educational institution and the enterprise.

For a number of technical and technological specialties and qualifications, practical training is difficult, or turns into a formality, as students under 18 do not have permission to work, including with equipment.

Second type of WT in TVET organizations is DT, where more than 60% of the study time is allocated to the practical component. When an enterprise organizes industrial training for students at workplaces, students master all production operations. As a result, the personnel management department of the enterprise has the opportunity to choose and offer graduates who wish to continue working as a specialist familiar with the technological features of the enterprise.

Despite the indicators of colleges, which show that 486 colleges have implemented DT, the enrollment of students in this form is 38823 students, 10% of the total number of students in the TVET system.

Quality of DT is determined by the level of social partnership and industrial development. According to the NCE «Atameken» Research and Production Enterprise, 389 (47%) colleges have implemented DT, cooperation agreements have been concluded with 2,410 enterprises, and 20,050 (4%) students are involved. Students undergo paid practice, some of them receive scholarships from employers. Some colleges count the time of training in the work experience<sup>34</sup> Despite the progress, there are a number of problems: the lack of qualified mentors in the workplace with knowledge of the basics of pedagogical skill; there are not enough student places at the enterprises for industrial training; according to the MES RK, available tax incentives for employers are ineffective; the system of independent industry certification of qualifications of graduates of educational organizations and specialists in the labor market has not been debugged. This is a key link in DT, allowing to evaluate the acquired skills of specialists for compliance with industry requirements.

According to the NCE «Atameken», domestic entrepreneurs are mostly not ready to invest in training, since they are difficult to make long-term forecasts. Many businesses simply do not have the free money to invest in education. Legislation of the RK does not provide tax preferences to the business for participation in training of personnel.

### D.1.2 Teaching and learning environment

Educational institutions must comply with the Licensing Regulations and the qualifications required for educational activities in order to teach them<sup>35</sup>. According to the qualification requirements, the proportion of full-time teachers of their total number should be at least 70%, the proportion of teachers of the highest and first categories of their total number – at least 30%. Libraries of state colleges have reading rooms, and computer rooms with Internet access.

In 2018, library fund was 23,590,312 units, and the number of publications per 1 trainee - 48 units (Table 26). In 5 years, the number of electronic textbooks in college libraries increased by 13%. Analysis of focus groups with teachers shows that colleges lack electronic textbooks in State language and English language.

*«In the classroom we use electronic textbooks, electronic lectures. But there are few electronic textbooks in the Kazakh language».*  
Source: Focus Data - Teacher Teams?

**Table 26. Library fund in TVET organizations, un.**

Year	2014	2015	2016	2017	2018
Library Fund, un.	22873814	23370017	23340059	23794984	23590312
Electronic textbooks, %	1,7%	1,8%	1,8%	1,8%	1,9%

Source: data of the SC MNE

Colleges have sports halls, medical rooms, dining rooms with hot meals, dormitories and study rooms, computer classes with Internet connection. Study rooms of colleges are equipped with stands corresponding to the profile of professions and specialties, visual aids, tables, posters, didactic materials, technical means of training.

<sup>34</sup> *Vnedrenie dual'nogo obucheniya v sisteme TiPO* [Introduction of dual training in the TVET system] (<http://esil.gov.kz/content/vnedrenie-dualynogo-obucheniya-v-sisteme-tipo>)

<sup>35</sup> *Pravila licenzirovaniya i kvalifikacionnye trebovaniya, pred'yavlyayemyh k obrazovatel'noj deyatel'nosti*. [Licensing rules and qualification requirements for educational activities». Order of the Government of the Republic of Kazakhstan from June 2, 2007 № 452.

Financing of equipment of the material and technical base is carried out by the local and republican budgets. The number of training rooms (by 3.5%), workshops (by 7%), laboratories (by 21%) and autodromes (by 12%) increased over 5 years, which is due to the increase in the cost of strengthening the material and technical base.

In the last 5 years, there has been an increase in both the number of computers (by 7%) and the proportion of computers (by 6%) with access to the Internet (Table 27). The number of students per computer: in 2014 - 14, in 2018 - 8. In the last 5 years the number of students per computer has decreased by 4 units, which shows a positive trend of computerization in the system of TVET. In 5 years, the number of interactive equipment kits in the TVET organizations increased by 23% (Source: data from the SC MNE).

**Table 27. Equipment with computers**

Year	2014	2015	2016	2017	2018
amount of computers	57903	60246	61756	62658	61666
of which are connected to the Internet	40305	43228	45113	47452	47468
proportion of computers connected to the Internet	70%	72%	73%	76%	77%
average number of students per 1 comp.	9	8	7	7	7

Source: SC MNE

There are still equipment problems. Not all colleges have teachers' workplaces equipped with personal computers, computer programs are outdated.

Focus group analysis showed that there is no Internet in the workshops of rural colleges.

*«I would like to use video materials in the classes, but there is no Internet».*

Focus group data with teachers and masters of VT.

In accordance with the Sanitary Rules<sup>36</sup> requirements for operation, water supply, heat supply, lighting, ventilation, repair and maintenance, living conditions, food, training and industrial practice, working conditions and public services for staff, medical support for college students are respected, regardless of ownership.

In rural colleges, the number of students per teacher for five years remains unchanged (12 people), while in the city for 5 years there is a decrease of 1 teacher. (Table 29). For 5 years there has been a decrease in the number of ETS by 2.5%, the number of students by 8.1%. (Source SC MNE)

**Table 28. The ratio of students and ETS, people**

year	2014	2015	2016	2017	2018
city	16	16	15	15	15
village	12	12	12	12	12
in state colleges	14	13	13	13	13
in private colleges	20	20	19	19	20

Source: SC MNE

## Description of policies

### D.1.3 Policies to improve training/teaching and learning methods in VET

Young Teacher School (YTS) works in colleges for the purpose of methodical assistance to young teachers. There is no single approach to the organization of the work of the YTS. Each college independently develops a plan, defines forms and methods of work. In all colleges, the main tasks of

<sup>36</sup> Санитарно-эпидемиологические требования к объектам образования. Приказ Министерства здравоохранения Республики Казахстан от 16 августа 2017 года № 611.

the YTS are to contribute to the successful adaptation of young teachers; to develop professional and pedagogical skills; to form a need for beginner educators in continuous self-education.

To improve their qualifications, ETS undergo continuing education courses once every 5 years. NC JSC «Holding «Kasipkor» over the past 2 years has developed 23 new educational programs of advanced training courses in 3 areas :

- 1) Updating of the content of the TVET (implementation of modular-competent approach, credit-modular technology, application bachelor's program, implementation of inclusive education, DT, criterion evaluation).
- 2) Innovative pedagogical technologies (CLIL, case studies, TBLT, BOPPPS, IT-technologies, etc.)
- 3) Targeted programs (for masters of industrial training, methodologists, tutors, implementation of WS standards, specialized programs in the specialties (oil and gas business, energy, construction, etc.).

Teachers take advanced training courses not only in their specialty, but also in the educational part, since most of the teachers are group leaders. The ED conducts a month where young teachers receive methodological assistance.

To solve the shortage of qualified mentors in the workplace with knowledge of the basics of pedagogical skills, the Department of Human Capital Development of NCE»Atameken» RK, together with the Craft Chamber of Trier, organized the training of mentors.

Institutional structure of DT has been created, within the framework of which NCE»Atameken» maintains a register of contracts and has created a mentor base. There are 95 training and resource centers in the regions for retraining specialists at enterprises, 2 consortiums, 9 industry clusters, and 21 certification centers.

National Chamber of Entrepreneurs has been working on the implementation of the subject «Fundamentals of Entrepreneurship» since 2014. During this time, experts reviewed the experience of international entrepreneurship education programs. The course is held for teachers who will teach a new subject. 1784 teachers will be trained before the fall.

#### D.1.4 Improving the training and learning environment

MTB of colleges are regularly updated. Expenses on MTB due to the LB in 2018 amounted to 3,788.4 million tenge. (Diagram 17). MTB is equipped with modern educational-production and technological equipment, the training of the ETS to work on new equipment in a number of colleges is carried out through projects within the framework of international cooperation. In 2018, 41 colleges strengthened the material and technical base through a loan from the World Bank. (Source: DE of the city of Nur - Sultan, Almaty, Shymkent and regions)

Over 5 years, the proportion of computers with access to the Internet has grown by 7%, while in rural colleges it has grown by 0.8%. (Table 29).

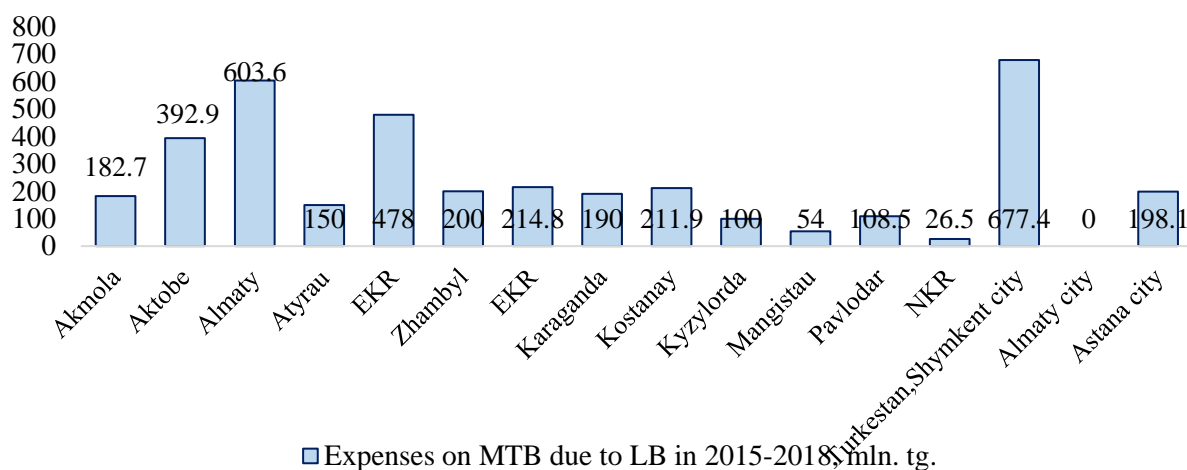
**Table 29 Proportion of computers in the educational process in TVET having access to the Internet**

year	2014	2015	2016	2017	2018
having access to the Internet (total)	72%	74%	53%	78%	79%
having access to the Internet (village)	56%	54%	59%	61%	61%

Source: SC MNE

**Chart 18. Expenses on MTB due to LB in 2015-2018, million tenge**





As part of digitalization, college teachers create digital educational content, develop electronic textbooks, lectures, methodical manuals. In order to automate the management of the educational process, colleges use such information systems as e-college, automated information system «Platonus», the Moodle platform and others. The content and proportion of digital content is not formally regulated. Colleges seek to increase digital content, but this process is not tracked. Also, all public and part of private colleges have official sites. There are no uniform standards for the design and content of the site, legislatively drawn up, but nonetheless the LEB requires certain rules to be followed (for example, posting on the site of state symbols, public services, etc.).

## D.2: Teachers and trainers

### Identification of issues

#### D.2.1 Composition of the workforce of VET teachers and trainers

There are three categories of pedagogical workers in the TVET institutions: Teachers of general education, special disciplines and masters of industrial training. In 2018, 38556 ETS worked in the TVET system (27571 ETS in state colleges, 10985 in private colleges) and 6005 masters of PT (5662 in state and 343 in private colleges) (Table 31).

The level of professional competence of pedagogical workers is determined by the qualification category. According to the Rules and conditions for the performance of the qualification of pedagogical workers, each teacher is obliged to raise (confirm) the qualification category after every five years.

**Table 31. Proportion of teachers and masters of TVET, %**

Total	2014	2015	2016	2017	2018
Teachers	33 361	32 580	32 484	32 961	32 551
State organizations	55%	57%	57%	56%	57%
Private organizations	35%	33%	33%	34%	33%
City	37%	37%	37%	37%	37%
Village	13%	13%	13%	13%	13%
Masters PT	5 634	5 537	5 643	5 978	5 005
State organizations	95%	96%	95%	95%	94%
Private organizations	4,8%	4,5%	4,5%	4,9%	5,7%
City	59%	59%	59%	58%	58%
Village	31%	31%	31%	32%	32%

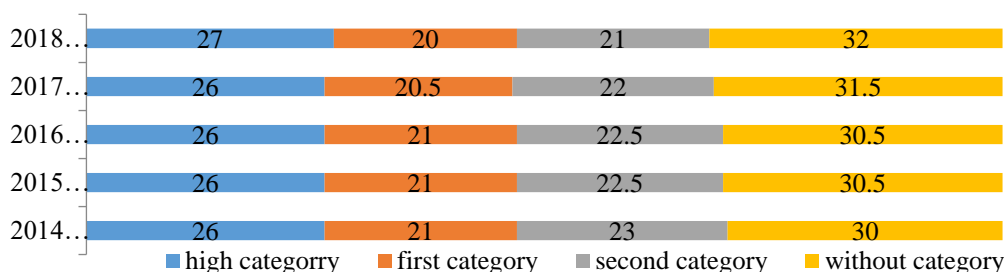
Source: SC MNE

From 2014 to 2018, there is a positive trend for teachers with the highest category: in 2014 -23%, in 2018 - 27% (Figure 19). Analysis of the certification of teachers over the past 5 years indicates an



increase in the professional skill of college teachers. This is explained by a set of measures aimed at creating the conditions for advanced training of teachers. Conditions that have a favorable effect on the certification of teachers are: professional development at various courses, training of teachers and masters of PT at enterprises, the possibility of obtaining a second higher education, the exchange of experience, social support for college teachers (payment of medical benefits, payment of continuing education courses, preferential trips to sanatoriums through the union, etc.).

**Diagram 19. The proportion of teachers and masters of PT from 2014 to 2018 who have qualification categories, %**



Source: data of NEDB

In 2018 47% of teachers and masters of VT had the highest and first categories, which corresponds to licensing requirements. The proportion of ETS without a category is 32%. Although colleges do not provide an additional fee for the category, all ETS staff of both public and private educational organizations once every 5 years increase their qualification level in accordance with the Rules for the certification of teaching staff.

In 2018 Rules and conditions for certification<sup>37</sup> were amended in which all pedagogical workers were divided into 5 qualification categories: teacher, teacher-moderator, teacher-expert, teacher-researcher, teacher-master. Teachers can pass both early and regular certification. Certification takes place in two stages: qualification testing and a comprehensive analytical synthesis of the results of activities.

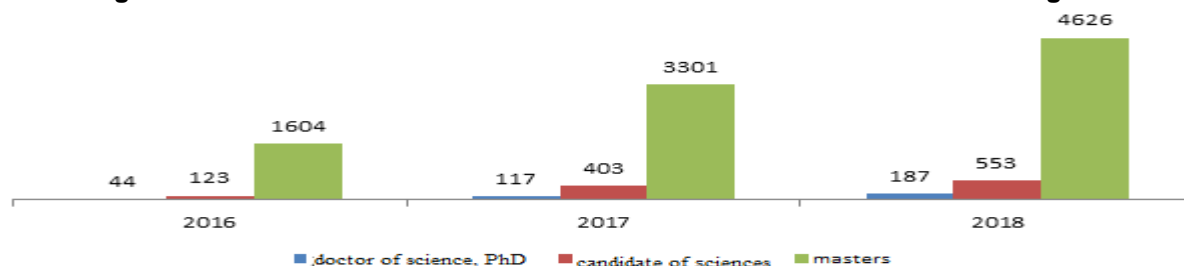
Purpose of certification is to stimulate the growth of qualifications and professionalism, the quality of pedagogical work, the development of creative initiative, as well as ensuring the social protection of teachers in the conditions of market economic relations by differentiating wages. But the new rules currently apply only to teachers of preschool and secondary education, with the exception of colleges. Teachers of special disciplines and masters VT of college are not paid for the category; the question of paying for the qualification category is still being decided. Another problem is that tests for testing have not been developed, and therefore it is not possible to conduct the first stage of certification. Tests are currently under development.

According to focus groups conducted in 2017 and 2018, college ETS are not interested in upgrading their category due to the fact that the qualification category is not taken into account when paying for their work.

<sup>37</sup> *Ob utverzhdenii Pravil i uslovij provedeniya attestatsii pedagogicheskikh rabotnikov i priravnennykh k nim lic, zanimayushchih dolzhnosti v organizatsiyah obrazovaniya, realizuyushchih obshcheobrazovatel'nye uchebnye programmy doshkol'nogo vospitaniya i obucheniya, nachal'nogo, osnovnogo srednego i obshchego srednego, obrazovatel'nye programmy tekhnicheskogo i professional'nogo, poslesrednego, dopolnitel'nogo obrazovaniya i special'nye uchebnye programmy, i inyh grazhdanskikh sluzhashchih v sfere obrazovaniya i nauki.* «On the approval of the Rules and conditions for the certification of teachers and equivalent persons holding positions in educational organizations implementing general education curricula for pre-school education and training, primary, basic secondary and general secondary, educational programs of technical and vocational, post-secondary, additional education and special training programs, and other civil servants in the field of education and science» Order of the Minister of Education and Science of the Republic of Kazakhstan dated January 27, 2016 №83

In TVET organizations, there is an improvement in the quality of ETS due to teachers with academic and scientific degrees. Compared to 2016, in 2018, the number of teachers with a doctorate in science, PhD increased almost 4.2 times, candidates 4.4 times, masters 2.8 times (figure 20).

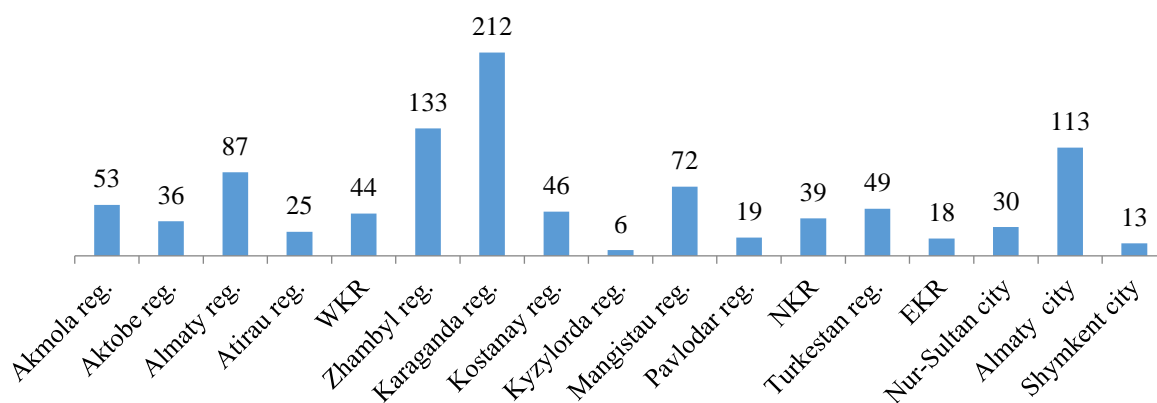
**Figure 20. The number of teachers of TVET with academic and academic degrees**



Source: data of NEDB

The problem of providing the system of TVET with highly qualified engineering and pedagogical personnel is a urgent one. In 2018, 995 teachers of special disciplines were lacking in the TVET system. (3%). The most acute shortage was felt in Karaganda (21%), Zhambyl (13%) regions and in Almaty (11%) (Figure 21).

**Figure 21. The need for teaching staff in the organizations of technical and vocational education in 2018, people**



(Source: data of MES)

72% of teachers are people from 25 to 54 years old, this is the most working age. In the TVET system, 9% are young people under 25 and 19% of teachers over pre-retirement and retirement age (Table 31).

**Table 31. The proportion of teachers by age**

age indicator	under 25	25-34	35-44	45-54	55-64	over 64
amount	2708	9620	6754	6204	4742	1149
percentage	9%	31%	22%	20%	15%	4%

(Source: data of NEDB)

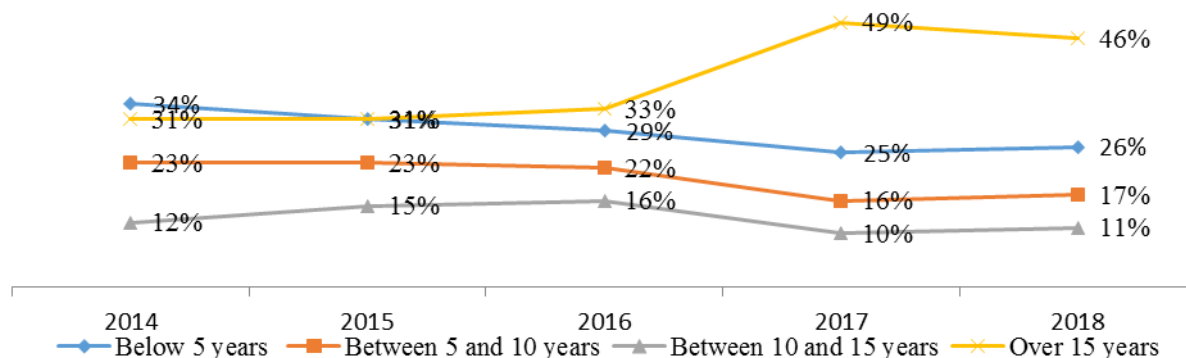
Over 5 years, proportion of teachers with over 15 years of experience has increased significantly (increased by 15% and in 2018 amounted to 48% (10,988 teachers). (Source: data of NEDB) This means that experienced teachers work in the TVET system.

46% of masters of VT had work experience of over 15 years, which indicates that college masters of PT have significant experience and this has a positive effect on the quality of training of specialists

(Figure 22). All masters of VT, including those who do not have work experience in production, undergo mandatory internships at enterprises 2 times a year.

Presence of experienced masters of PT, involves the exchange of experience with young specialists. 26% of masters of VT have work experience of up to 5 years, which indicates the influx of young specialists into the TVET system. These are those specialists who have the knowledge and strength to implement new innovations and initiatives being implemented in TVET.

**Figure 22. Characteristics of masters of VT by work experience, %**



Source: NEDB

If we analyze teachers by gender, we can conclude that comparative data demonstrate a stable feminized picture of the teaching staff (in 2018, 73.5% are women) (Table 32).

In the colleges of the country, 95% of the ETS are with higher education. (Source: NEDB). Promotion in the post is carried out by the management of the organization on the basis of professional achievements, executive discipline and managerial skills. The teacher can move from the position of the teacher to the position of head of the department and deputy director.

**Table 32. Composition of ETS by gender, 2014-2018, 2014-2018, %**

year	2014	2015	2016	2017	2018
Female teachers	74%	74%	74%	73,50%	73,50%
Masters women	45%	45%	44%	44%	44%

Source: data of NEDB

It is not possible to analyze data on staff turnover at the national level, since statistics are not kept in this direction.

Thus, there are problems in the teaching staff of the colleges, such as the shortage of teachers, mainly special disciplines, are not paid for qualification categories.

## D.2.2 Entering the teaching profession in VET

A teacher of general educational disciplines must have a higher (or postgraduate) education without presenting requirements for work experience. Must be able to independently develop a methodology for teaching the subject, use the forms and methods of active learning, be able to organize diagnostic work with students; provide sustainable positive results in the educational process, take an active part in the work of creative groups, methodical associations, schools of excellence within the educational institution.

Teacher of special disciplines of the college must have a higher (or postgraduate) education in the corresponding profile. Depending on the presence or absence of a category, various requirements for

his qualifications are presented to the teacher of special disciplines. With the increase in the category, the requirements for the teacher also increase<sup>38</sup>.

Teacher of the second category should be able to independently develop a methodology for teaching the subject, use active teaching methods, provide sustainable positive results in the educational process, take an active part in the work of methodological associations and schools of excellence within the college.

Following requirements are imposed on the first category teacher: at least 3 years of work experience as a teacher or at least 2 years of work experience in a profile; knowledge of the methods of analysis of educational and methodological work on the subject, the ability to manage creative seminars, the work of creative groups, participation in the implementation of new educational programs, textbooks, teaching aids.

Teacher of the highest category must have at least 4 years of work experience as a teacher, or at least 3 years of production experience in a profile, or a candidate's degree in a profile without presenting requirements for work experience. A teacher of the highest category should be able to develop new curricula, pedagogical technologies, teaching and upbringing methods, conduct work on testing them, have authorial developments on training and upbringing issues, and lead creative groups to develop urgent problems in the field of education.

Master of PT must have a higher education (bachelor's or master's degree) or technical and vocational education with the qualification of a mid-level specialist. For the master, as well as for the teacher, requirements are made depending on its category. Experience in the workplace is desirable, but this is not a requirement. Master of the highest qualification of the second category actively solves the tasks of complex methodological support of the educational-production process. The master of the first category is directly involved in the work of methodological commissions and sections. A specialist of the highest qualification level of the highest category is able to develop private vocational training methods, conducts work on approbation; knows how to summarize best practices, participates in the implementation of new training programs and technologies.

These requirements are sufficient to enter the profession of a teacher and master of VT.

### D.2.3 Employment status of teachers in VET

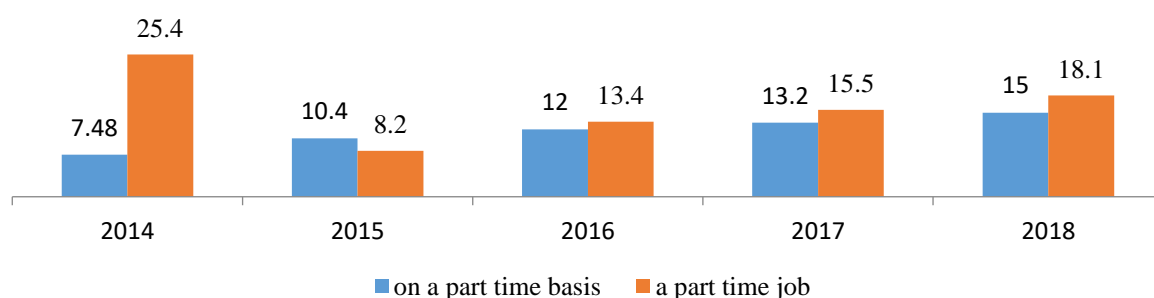
In 2018, 15% of teachers worked part-time, i.e. in his spare time from his main job, another regular paid work is performed by a person and 18.1% on a part-time basis (*Figure 23*).

Since 2015, the number of part-time teachers has been increasing. This is due to the lack of teachers of special disciplines and low salaries.

**Figure 23. The proportion of ETS, working half-time and part-time,%**

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<sup>38</sup> *Ob utverzhdenii Tipovyh kvalifikacionnyh harakteristik dolzhnostej pedagogicheskikh rabotnikov i priravnennyh k nim lic* [On approval of the Typical qualification characteristics of the posts of teachers and equivalent persons], Order of the Minister of Education and Science of the RK dated July 13, 2009 № 338



Source: NEDB

In the RK, the data of contract workers are not collected for hire.

Wage system for employees of state educational organizations is determined in the manner prescribed by the legislation of the RK. Salaries of teachers of state institutions and state-owned enterprises of education, bonuses and allowances, as well as other incentive payments are determined by the legislation of the RK.

Payment to teachers and masters of TVET is made on the basis of the order of the MES<sup>39</sup>.

In the law «On education» in article 52 the system of wages of employees of educational organizations is described. Standard training load per year for the calculation of monthly salaries of teachers is 1080 hours. Salaries of teachers depend on several factors, including education, seniority, workload.

Teachers for managing classrooms, laboratories, workshops receive a bonus of 25%, combined workshops - 30%, for managing a group - 25%, for checking notebooks and written works in Kazakh, Russian and other languages - 25%, in mathematics, chemistry, physics, biology, foreign language, drawing, design, technical mechanics - 20%.

Masters of vocational training, staffed by educational institutions, are paid for monthly salaries<sup>40</sup>.

Average monthly nominal wage of one employee in the 3rd quarter of 2018 according to the data of the SC MNE RK amounted to 161,783 tenge (\$ 419) (Table 33).

**Table 33. Top 10 areas of activity with the lowest wages<sup>41</sup>**

area of activity	average wage	place in top 10
pre-school education	62 373 tenge (162\$)	3
primary education	80 381 tenge (209\$)	5
TVET	97 482 tenge (253\$)	8
higher education	149 874 tenge (389\$)	9

Source: site of Ministry of Labor and Social protection of population of the RK

<sup>39</sup> *Ob utverzhdenii Pravil ob ischislenii zarabotnoj platy rabotnikov gosudarstvennyh organizacij obrazovaniya, finansiruemyh za schet sredstv byudzheta* [On approval of the Rules on the calculation of wages of employees of state educational organizations financed from the budget] Order of the Minister of Education and Science of the RK dated January 29, 2008 № 40.

<sup>40</sup> *Pravila ob ischislenii zarabotnoj platy rabotnikov gosudarstvennyh organizacij obrazovaniya, finansiruemyh za schet sredstv byudzheta* [Rules on the calculation of wages of employees of state educational organizations financed from the budget] Order of the Minister of Education and Science of the RK on January 29, 2008 № 40

<sup>41</sup> <https://www.enbek.gov.kz-caifir> web-site of the Ministry of Labor and Social Protection of the Population of the RK

By industry sectors, the highest average monthly salary have representatives of financial and insurance activities which is 298.97 thousand tenge, then «Professional, scientific and technical activity» - 255.11 thousand tenge and «Industry» - 223.3 thousand tenge.

Despite the increase in the average monthly salary in colleges, there is a shortage of teachers of special disciplines and masters of PT. One of the reasons is the annual outflow of ETS to production. Uncompetitive salaries in colleges do not allow retaining existing ETS and attracting workers from production. According to the data of the SC MNE, an engineer in production receives an average of 280 thousand tenge, which is 2.8 times higher than the average salary of a teacher. Thus, production specialists are not interested in working in colleges.

Secondary school teachers who have switched to the updated content of educational material receive a salary supplement. Also, school teachers receive a supplement for the qualification category. And the teachers of colleges do not have such additional payment and therefore the teachers of colleges are not interested in upgrading the qualification. At the same time, teachers are assigned qualification categories in order to improve their knowledge, skills, and teaching skills. That is, in accordance with the law «On Education», a teacher must constantly improve his professional skills, intellectual, creative and general scientific level. Teachers and masters of PT left to production due to low wages.

#### D.2.4 Quality of teachers and trainers in VET

To rate the quality of teachers and masters of PT in Kazakhstan, there are the following mechanisms: certification, rating of teachers' activities, questionnaires and surveys of students about the activities of the teacher.

During the certification, the teachers present the materials of the complex analytical summary of the results of their activities, which includes the results of the survey of students conducted by the college administration, feedback from parents, colleagues, administration, managers of the bases of practice, employers collected by the certified. In addition, the certified employee provides the results of pedagogical activity: documents confirming their own participation and participation of students in educational, creative, subject Olympiads, competitions, reviews and the dynamics of professional performance for 3 years. Following the results of the activities of the certified employee, the certification Commission makes a decision on the conformity or non-conformity of the declared qualification category. Following the results of the activities of the certified employee, the certification committee makes a decision on the conformity or non-conformity of the declared qualification category.

In order to increase professional competence, work efficiency, stimulate teachers, and motivate further activities, each college conducts a rating of the activities of teachers and masters of PT. There is no single approach and rating requirements for teachers and masters of PT; each college determines the rating parameters individually. Rating results are usually conducted based on the results of the semester and the school year. Most ratings include such indicators as; work on a scientific and methodological topic, introduction of pedagogical technologies, conducting an open lesson and extra-class event, creating educational and methodological documentation, summarizing his own pedagogical experience, participating in the work of pedagogical and methodological councils, publications in the media, participating in competitions of pedagogical and professional skills, visiting the lessons of colleagues, improving skills, leading the creative and research work of college students. The rating results used by the college management for personnel policy, promotion of employees.

In addition, in colleges, the methodological office, the psychological and pedagogical service conducts surveys, questionnaires «Teacher through the eyes of students». The data of these questionnaires allow us to conclude on the quality of work of a particular teacher and are used for decision-making.

One of the criteria for improving quality is the continuing education of teachers. In Kazakhstan there is a formed system of pedagogical education and training of pedagogical personnel. Teachers must



undergo continuing education once every 5 years. Courses are conducted by the JSC «NCPD «Orleu». NC JSC «Holding «Kasipkor», National scientific and practical educational centers, universities and legal entities regardless of the forms of ownership and carrying out activities in accordance with the charter for the conduct of courses, as well as by the regional cities of Nur-Sultan, Almaty and Shymkent, method classes of district (city) education departments. Teachers are trained not only in their specialty, but also in their educational part, since most of the teachers are leaders of study groups. In the context of modernization of the TVET system, the issue of improving the professional level of heads of TVET organizations is acquires special relevance.

Course training is conducted according to educational programs approved by the order of the MES<sup>42</sup>, aimed at the formation of new professional competencies, the implementation of a new type of educational activity in the organizations of the TVET. Teachers and masters of PT take courses on various topics: these are educational programs developed on the basis of a module-competency-based approach, the introduction of credit-module technology, educational programs of applied undergraduate studies, the introduction of IT technologies in the educational process, the teaching of special disciplines (modules) in English based on the integration of CLIL, TBLT methods and the BOPPPS model, the development of a business system and financial and legal literacy in TVET organizations, the main aspects of the process organizations and regional championships on WS and DT standards.

In order to continuously improve their professional skills, ETS undergo internships at enterprises (see D 2.6)

The state recognizes the special status of the teacher in society and creates conditions for the implementation of professional activities and in January 2019 the Law «On Status of the Teacher» began to be developed in Kazakhstan.

But despite all the measures taken, there is a serious human personnel problem in the country. The salary of teachers and software masters, despite the efforts of recent years, remains uncompetitive; the prestige of the profession is falling. In Finland, for example, the best 10% of school graduates become teachers, in Kazakhstan the picture is the opposite.

Training of teachers in Kazakhstan, the system of teacher education and the system of professional development and support for novice teachers leaves much to be desired. It is recognized all over the world that teachers need to develop their professional qualities, and not just every few years, but constantly. In many countries, special bodies exist to coordinate the quality of teacher training. For example, in the UK there is a Teacher Training Agency, which has been assigned the quality control functions of teacher training. Moreover, in the UK, for example, choosing a place and a form of advanced training remains for the teacher. This system in the UK is fully decentralized and operates on a market basis.

Most successful countries achieve high learning outcomes by attracting the most talented people to teaching and their effective professional development, leading to an increase in the quality of education.

## Description of policies

### D.2.5 Attracting and retaining teachers and trainers in VET

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<sup>42</sup> *Ob utverzhdenii obrazovatel'nyh programm kursov povysheniya kvalifikacii pedagogicheskikh kadrov organizacij tekhnicheskogo i professional'nogo obrazovaniya* [On the approval of educational programs of continuing education courses for teachers of technical and vocational education organizations] dated March 10, 2016 № 193



To solve the problem of the shortage of teachers and masters of PT, some colleges attract specialists from manufacture, as well as part-time workers, in the educational process.

Mostly women work in the TVET system (74%), while men leave due to low wages. But among masters of PT, 56% on average are men, which is associated with technical specialties. Working day of the ETS under the employment contract is 8 hours and therefore it is practically impossible to work part-time.

Problem of disinterest in upgrading the category was aggravated by the new certification rules, but colleges cannot yet pass certification according to the new rules, since there is no database of tests in special disciplines.

College managers are taking steps to retain staff. One of the mechanisms of motivation of ETS is the awarding of diplomas and letters of appreciation (director of the college, akimat, DE, MES and other departments). Also, many colleges try to find funds to reward their employees.

Low salaries of teachers in TVET remain one of the reasons for the shortage of teachers. Since July 1, 2019, the Government decided to increase the salaries of teachers by an average of 30% (approximately \$ 28) of the base salary.

## D.2.6 Steering, motivating and supporting professional development

To improve the provision of the TVET system with qualified teaching staff, a prospective training plan for teachers for 5 years is drawn up at each college with a separation from production of at least two weeks. The training is carried out according to this plan. The courses are conducted both by affiliated organizations, such as JSC NCPD «Orleu», Holding «Kasipkor» and private organizations.

For the most part, teachers of public colleges take advanced training courses at the expense of the state, but teachers can study in additional courses and at their own expense.

Such course as NC JSC «Holding «Kasipkor», JSC «Orleu» provides conduct courses for state colleges as part of state assignments and for teachers of private colleges organize paid courses. In most cases, heads of private colleges are also interested in upgrading the skills of their pedagogical staff and are seeking funds to upgrade their skills. In addition, annually the college's teachers improve their qualification at seminars, methodical days. One of the mechanisms of advanced training and generalization of advanced pedagogical experience can be considered methodical days, which are carried out according to the plan of ED management at each college annually. In the programs of methodical days, teachers and masters who have a large experience of work or certified teachers, conduct open lessons, master classes, trainings, public events.

To improve professional skill, teachers participate in the work of methodological associations, creative groups, in professional skill contests, master classes, forums, festivals, etc. In the institutions of TVET, a young teacher's school operates, where, for the provision of pedagogical and methodological assistance during the period of professional adaptation to young teachers, mentors from among experienced teachers are assigned. In the institutions of TVET, an YTS operates, where, for the provision of pedagogical and methodological assistance during the period of professional adaptation to young teachers, mentors from among experienced teachers are assigned. Young teachers are assisted in the development of educational programs, educational and methodological complexes, in the introduction of modern approaches and innovative pedagogical technologies in the educational process. Young teachers attend classes of experienced teachers.

Construction of educational programs on the basis of a modular competency-based approach requires constant feedback from the requirements of employers. Therefore, in order to continuously improve their professional skills, teachers and masters of PT undergo internships at enterprises. The internship program provides an opportunity to acquire additional professional competencies and conduct practical exercises at a high professional level. In 2018, the share of ETS that completed internships

at enterprises was 1.4%, while in 2014 it was 4%. However, this is a very low indicator for the TVET system (Source: NEDB).

In order to stimulate and recognize the work of experienced teachers, the ED and methodological offices annually hold a regional competition among the ETS of colleges for awarding the title of «Best Teacher». Every year, the MES conducts a republican contest «Best teacher», the purpose of which is to identify, support and encourage advanced teachers, disseminate pedagogical experience and increase the prestige of the teacher's work. The winner of the 2018 contest was awarded with the badge «Uzdik pedagog - 2018» and a certificate worth 2 million 405 thousand tenge.

There is a desire of individual teachers to career growth, the need to achieve professional prestige and respect from colleagues. Promotion in the post is carried out by the management of colleges on the basis of professional achievements, executive discipline and managerial skills. The teacher can move from the position of the teacher to the position of head of the department and deputy director.

Proportion of teachers who took advanced training courses over 5 years decreased by 25% (in 2014 - 47%, in 2018 - 22%). Also, the ETS of colleges undergo training courses abroad; in 2018 the proportion of the ETS who passed training courses abroad was 0.6% (Table 34).

Content of the training programs is aimed at training on two key components - practical and theoretical. It should also be noted that teacher training courses are conducted mainly outside the educational institution and, as a rule, with a margin from the educational process. And this has a number of drawbacks: high costs, theory is more often studied than practice, and it can be difficult to apply in ordinary work. At the same time, teachers are forced to undergo this form of training, as during certification of a teacher confirmation of completion of courses, seminars, etc. in the form of certified certificates is required.

**Table 34. The number of ETS, passed the PC, people**

Position	2014	2015	2016	2017	2018
Director	2%	2%	3%	3%	2%
deputy director	6%	6%	9%	8%	8%
masters of vocational training	15%	12%	19%	17%	16%
Methodologist	2%	2%	3%	2%	2%
teachers of special disciplines	39%	29%	39%	33%	29%
teacher of BMT	2%	1%	2%	2%	2%
teachers of general subject	31%	26%	8%	24%	21%
Psychologist	2%	2%	2%	2%	5%
Others		20%	15%	9%	15%

Source: NEDB

### D.2.7 Ensuring the quality of teachers in VET

To ensure the quality of the teachers of TVET in the college, there are the following mechanisms: The YTS, the school of pedagogical skill, mutual attendance of classes, and the conduct of methodical days.

One way to ensure the quality of teachers is to have teachers attend each other classes. This type of experience exchange is applied both inside the college, and at the level of the city, region, these visits gives teachers the opportunity to share their experience, is one of the forms of professional development and dissemination of best practices.

All colleges held a methodical day once a year, where they share work experience according to the methodological theme of the college or according to their methodological topic. The main goal of the methodical days is to increase the level of professional skill of teachers and disseminate the best pedagogical experience of college teachers.

## D.3: Quality and quality assurance

### Identification of issues

#### D.3.1 Quality and relevance of education and training content in VET

The set of general requirements that determine the quality for each level of education is determined by SCES. SCES of TVET defines the requirements for the content of education, the maximum amount of academic load, the level of training of students and the duration of training in educational programs of technical and vocational education. When pursuing a policy in the field of TVET development, the most important condition for meeting the needs of the economy is the involvement of all interested parties.

To meet the demand of the labor market, TVET is switching to modular competency programs.

The programs are developed in accordance with international requirements and take into account the needs of Kazakhstan employers. The updating of model curricula and programs on the basis of a modular and competent approach has been carried out since 2016. For the period from 2016 to 2018, 246 MC were updated, including full modules of the educational program necessary to achieve a certain level of qualification (2016 - 65 MC, 2017 - 108 MC, 2018 - 73 MC).

In the actualized MC, the goals of training are professional competencies, as a means of achieving them is the modular construction of the structure and content of professional training.

In 2018, out of 266 specialties of the Classifier of professions and technical and vocational education of TVET in 246 (92.6%) specialties, MC and programs were updated taking into account the modular competence approach and the requirements of employers. In the Rules of organization of educational process on credit technology of training has been introduced the section TVET, providing organization of educational process of credit technology of training in TVET<sup>43</sup>.

In 2016, methodological recommendations were developed for the development of MC applied bachelor's degree, taking into account the credit and modular training technology. In 2018, 15 MC for applied bachelor's degree were developed. In the 2018-2019 academic year, application bachelor's programs, taking into account the credit and modular technology of training, have already been implemented in experimental mode<sup>44</sup> in 27 colleges.

Analysis of employment of graduates shows that in the last 5 years the share of employed graduates of TVET increased by 3% (Table 35).

**Table 35. The proportion of employed graduates of the TVET**

year	2014	2015	2016	2017	2018
share of employed	58%	57%	59%	61%	61%
share of entered in HEI	16%	14%	16%	15%	16%

<sup>43</sup> *O vnesenii izmeneniya v prikaz Ministra obrazovaniya i nauki Respubliki Kazahstan ot 20 aprelya 2011 goda № 152 «Ob utverzhdenii Pravil organizacii uchebnogo processa po kreditnoj tekhnologii obucheniya* [«On Amending the Order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 № 152» On Approving the Rules for the Organization of the Educational Process on Credit Technology of Education»] Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 12, 2018 № 563 (registered with the Ministry of Justice of the Republic of Kazakhstan under № 17554.

<sup>44</sup> *O vnedrenii prikladnogo bakalavriata v organizaciyah tekhnicheskogo i professional'nogo, poslesrednego, vysshego obrazovaniya v rezhime eksperimenta* [«On the introduction of applied baccalaureate in organizations of technical and professional, post-secondary, higher education in experimental mode»] Order of the Ministry of Education and Science of the Republic of Kazakhstan dated June 26, 2018 № 305

Source: SC MNE

### D.3.2 Defining the quality of learning outcomes

Law of the RK «On Education» states that state control over the quality of education is ensured by creating and ensuring the functioning of the national system for assessing the quality of education (Law of the RK «On Education», Article 8). At the same time, there is a problem of quality management, since, according to the legislation (Law RK «On Education», art.55), the management of the quality of education is carried out by making managerial decisions at all levels of education, with the exception of technical and professional, post-secondary, post-graduate education, on the basis of the results of educational monitoring.

Formal definition of quality in TVET is based on the conformity of the SCES formation.

Strategic plan for the development of education for 2016-2019 (DGRK dated July 24, 2018 № 460) reflects specific measures to control and ensure quality.

Based on the SPECD for 2016-2019, strategic plans of regions and TVET organizations are being developed, which also include issues and measures to ensure quality. In order to improve the quality of training and to bring educational programs into line with the requirements of international standards, international accreditation of TVET educational institutions on a voluntary basis will be introduced from 2020. It is planned to introduce a rating system for college educational programs based on a survey of employers on an annual basis.

Main indicators will be the employment, salary of graduates and the quality of educational programs of colleges. The mechanism for implementing quality assurance measures is not well developed. For example, it is not completely determined how and by whom the college educational programs will be rated, how the independence and objectivity of the college educational programs will be ensured based on a survey of employers.

At the moment, the system for ensuring and assessing the quality of education in TVET includes several basic elements. First is licensing. It provides access to the educational services market only to those who possess the minimum necessary material, intellectual and other necessary resources. MES RK is consistently moving towards optimizing licensing functions: many procedures that could be excluded were removed from the licensing system.

Transparency of all stages of licensing is ensured by the implementation in electronic format, decisions are reflected on the site. The second element is state control. At the national level, a unified control system operates, the structure of which includes the territorial departments of the control committee in the field of education, which compare the activities of TVET organizations with legal norms.

The third element is accreditation. Procedure determines the prospects for the development of educational organizations, its maximum attainable level with available resources (material, technical, human and others). The legal framework for accreditation is working. There is a register of accreditation organizations. It includes 6 Kazakhstan and 4 foreign agencies. They conduct an independent professional assessment of the quality of educational services. The fourth element is ratings. For example, NC JSC «Holding «Kasipkor» ranks TVET organizations in five areas (indicators): 1) quality of activity; 2) professional staff; 3) interaction with the business community; 4) participation in the WS project and other innovative projects; 5) contingent of students.

The quality of activities includes: passage of independent accreditation, the share of new educational programs, the share of laboratories or workshops, the share of developed teaching aids, digital educational resources in the specialties, the share of ETS who underwent further training and internships.

Interaction with the business community includes such indicators as the level of social partnership and cooperation with employers, business, the number of cooperation agreements between the college and the enterprise, the percentage of students studying in DT.

Indicator «contingent of students» includes: the share of students who took prizes in competitions of professional skill and the safety of the contingent of students until graduation in specialties.

In colleges, quality management systems based on ISO standards are introduced to improve the quality of education and meet the needs of customers in the face of employers, students and their parents.

Global trend in assessing the quality of education and the development of education is the functioning of an independent certification system and knowledge assessment. For 2018, there are 21 certification centers in the country. The qualification of college graduates and specialists is carried on by the leading republican branch associations. Graduates of short-term courses are certified. However, certification is now on a voluntary basis. To move to voluntary certification, it is necessary to improve the regulatory framework for certification, tighten requirements for enterprises (businesses) in the field of qualification of workers and specialists, as well as in matters of hiring and remuneration. Industry associations propose to create compulsory certification centers on the basis of existing organizations, which will give a conclusion: Whether the diploma confirms the quality of the received education. It is necessary to establish common standards for independent evaluation, creating a national certification system (NSC).

As part of the internal quality control of training in the learning process, students pass the current, intermediate and final control. Ongoing control of academic performance, intermediate and final certification of students is carried out in accordance with the «Model Rules»<sup>45</sup>.

Final examination (FE) of students of TVET organizations includes passing final exams in general professional and special disciplines and (or) modules, or performing and defending a graduation project (work), or performing and defending a diploma work with passing a final exam in one of the special disciplines and (or) module.

For conducting FE students in educational institutions, a final certification commission is created by order of the head of the educational organization. The composition of the FE Commission is formed from the number of representatives from employers, qualified specialists of enterprises, teachers of special disciplines, masters of VT.

It is necessary to note the existing problems in the field of quality assurance and assessment:

- 1) The outdated material and technical base of colleges does not ensure the quality of training and the attractiveness of the TVET system.
- 2) The mechanisms of independent certification of qualifications of TVET students with the involvement of employers on the basis of industry associations have not been finalized.
- 3) Certificates of the level of professional training of graduates are often not recognized by employers and managers of enterprises. Only some professional employers associations have begun to independently certify college graduates.

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<sup>45</sup> *Tipovye pravila provedeniya tekushchego kontrolya uspevaemosti, promezhutochnoj i itogovoj attestacii obuchayushchihsya dlya organizacij srednego, tekhnicheskogo i professional'nogo, poslesrednego obrazovaniya* [Model rules for conducting the current monitoring of progress, intermediate and final certification of students for organizations of secondary, technical and professional, post-secondary education] Order of the Minister of Education and Science of the Republic of Kazakhstan № 125 of March 18, 2008

- 4) The quality of the training of specialists is low. Only 7% of them were accredited by the beginning of 2019, the lack of mechanisms for confirming the quality of the TVET system

There is no single monitoring of the results of the implementation of quality management systems based on ISO standards.

### D.3.3 Quality assurance processes in VET

To ensure the quality of TVET in Kazakhstan at the level of educational institutions, the following mechanisms exist: licensing, certification, and accreditation. At the level of students - the final certification of graduates. In accordance with the Law of the Republic of Kazakhstan «On Permits and Notifications», educational activities are subject to licensing. Licensing is carried out by the MES RK. Until 2018, state certification of educational organizations was conducted. Certification was carried out by the MES RK. The next quality assurance mechanism is accreditation. College Accreditation Roadmap for 2016-2020 was developed and approved. International accreditation of the TVET organizations is legally established. Accreditation of educational organizations in Kazakhstan is carried out on a voluntary basis and is carried out at the expense of educational organizations. The accreditation procedure is not available to all colleges due to the high cost. In colleges, a «Regulation on a monitoring system for the quality of education» is being developed and monitoring of the quality of education is being carried out, which includes such diagnostic procedures as: diagnostics, testing, questioning, monitoring, certification, tests and creative work. Analysis and evaluation are carried out on the basis of a system of indicators and quality criteria. The main disadvantage is that the monitoring of the quality of education is irregular in nature, carried out sporadically. In addition, the relationship between the survey results is not monitored, due to which the dynamics of changes are not revealed, and trends are not detected.

External evaluation of the system of quality assurance of education is carried out by the state authorities on the compliance of the educational process with normative documents and legislative norms, fulfillment of license indicators, on the part of employers, for which two main criteria are important: Satisfaction of the quality of graduates' training, their qualifications, and reduction of the costs of retraining of personnel, on the part of society, for which the following criteria are important: Availability of education (financial, territorial), employment of graduates, on the part of the student, graduate.

### Description of policies

### D.3.4 Creating and updating VET content

Since 2012, there has been a process of developing new and updating existing educational programs for TVET. Model curricula and programs are developed in accordance with the Law «On Education», the requirements of SCES of the relevant level, on the basis of a competent approach to the organization of the educational process. MES RK in order to provide methodological assistance to pedagogical workers involved in the development of standard curricula and programs for TVET, a methodological recommendation was approved for the development of standard curricula and programs for TVET<sup>46</sup>.

To test new teaching technologies and introduce new educational content, experimental educational programs are being developed that are implemented in educational institutions working in the experimental mode.

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<sup>46</sup> Order of the acting Minister of Education and Science of the Republic of Kazakhstan dated December 29, 2016 № 727



Since the 2018 academic year, typical curricula and programs in the specialties of TVET are developed in such a way that graduates can receive up to two working qualifications and the qualification of a middle-level specialist, and in some specialties the qualification of an applied bachelor in one specialty.

Model curricula and programs are subject to approval by an authorized educational authority<sup>47</sup>.

In general, development of the content of curricula and training programs is carried out on the basis of a modular competency approach, taking into account professional standards, requirements and standards of the international WS movement, industry standards. In the absence of WS standards and professional standards for any qualification, the employer's legal documents containing labor functions and job responsibilities are used, in addition, mandatory consultations with the employer are held.

On the basis of working curricula and a catalog of elective disciplines and (or) modules in the specialty, students with the help of an adviser draw up an individual curriculum (ICP). The form, structure, procedure for developing and approving the catalog of elective disciplines and (or) modules of ICP are determined independently by the TVET organization.

In order to take into account the changing demand for professional skills in the labor market, a direct employer, who is a social partner, is involved in the development of work curricula and plans when developing work curricula and programs, while the employer participates in the process of determining learning outcomes and criteria for their evaluation.

In SCES to ensure the interests and requirements of the employer, to achieve the principle of the practical coordination of education, changes were made in accordance with which, in the development and implementation of working curricula and programs, colleges have the right:

- to change up to 50% of the amount of training time allocated for the development of training material for cycles and up to 60% (up to 80% with DT) of industrial training and professional practice;
- change the content of curricula up to 50% (up to 80% in case of DT) and up to 60% (up to 80% in case of DT) according to the professional module;
- introduce additional disciplines (professional modules) at the request of employers while maintaining the total number of hours for compulsory education.

Moreover, given that people with basic secondary education are accepted for training in the TVET organization, at the discretion of the college, general educational disciplines are integrated into the modules.

On the whole, the issues of updating the content of the educational process of the TVET system, including the development and updating of curricula and programs, are carried out by colleges with the methodological support of NC JSC «Holding «Kasipkor». The initiators are the LEB, colleges together with employers who are social partners.

According to the State plans for the development of education, the National System of qualifications is being revised in accordance with international requirements and the needs of the labor market.

Classifier of professions and specialties of TVET is being finalized in accordance with the requirements of ISCED, new specialties will be introduced taking into account the requirements of employers and international standards.

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<sup>47</sup> *Ob utverzhdenii tipovyh uchebnyh planov i tipovyh uchebnyh programm po special'nostyam TiPO* [«On the Approval of Typical Curricula and Typical Curricula in TVET Specialties»] Order of the Ministry of Education and Science of the Republic of Kazakhstan dated June 15, 2015 № 384

However, there are problems in this area:

Mechanism to encourage employers to participate in the process of developing the content of the TVET, namely, the employer has certain rights in this field, but does not always hurry to implement them, since it does not have a direct financial, personnel or other interest;

It is necessary to expedite the consideration of the issue of the Unified National Classifier of Occupations, taking into account the continuity of qualification levels, in order to synchronize curricula and TVET programs with universities, which will optimize training time and eliminate duplicate courses and disciplines;

During the implementation of educational programs in the experimental mode, there may be obstacles to the activities of the organization of education on the part of regulatory authorities (CCES), due to an inconsistent interpretation of the current regulatory standards.

### D.3.5 EU key competences

In 2006 European Parliament and the Council of the European Union adopted the «Recommendations on Key Competencies for Lifelong Learning». The recommendations establish eight key competencies (KC).

Currently, the requirements for competencies have changed, as more and more jobs are subject to automation, and entrepreneurial, social and civic competences are becoming increasingly important to ensure sustainability and the ability to adapt to changes, therefore, KC are currently being reviewed and finalized (Recommendations of the Council of the EU of 22 May 2018 «On key competencies for lifelong learning»).

In SCES TVET there is the concept of «core competence» (CC) - the ability to manage oneself and one's own activity, the tendency to self-motivation and self-organization and PC - the ability of a specialist to solve a set of professional tasks based on knowledge, skills and personal qualities that allow for effective implementation professional activity.

In new and updated educational programs, the requirements for the level of training of students are expressed through CC and PC. A separate category of KC, as in the EU countries, is not officially allocated.

Under the KC imply competencies that are related to meta-subject content, can relate to both basic and professional competencies. These are the competencies that graduates need for personal realization and development, active citizenship, social inclusion and employment.

Level of training of students with modular training technology involves the development of modules for the formation of CC and PC. CC are developed for the specialty and address issues of social responsibility, organization of work, relationships with other people in the workplace, which corresponds to such KC of the EU as: 1) communication in the native language; 2) communication in foreign languages; 5) the ability to learn; 6) social and civic competencies.

TVET educational programs include educational components aimed at inspire national values, developing patriotism and citizenship, developing diverse interests, which corresponds to such EU KC as: 1) communication in the mother tongue; 5) the ability to learn; 6) social and civic competencies; 7) initiative and enterprise; 8) knowledge of culture and expression of cultural affiliation. TVET policy is aimed at the formation and development of such CCs that are associated with spiritual and moral values (Program for the modernization of public consciousness «Rukhani Zhangyru»), relevant to the EU KK: 6) social and civic competencies; 8) knowledge of culture and expression of cultural affiliation.

Content of these requirements is recorded in the relevant regulatory documents in the form of standard curricula and programs, qualification or educational standards, focused on the result - on the formed competencies of a qualified worker and specialist.

Among the CC and PC in the development of working training programs and plans include competencies that to some extent overlap with the KC of the EU.

For example, CC: «To have the ability to communicate verbally in the state, Russian and foreign languages to solve interpersonal and intercultural interaction» - corresponds to such KC as: 1) communication in the native language; 2) communication in foreign languages; CC «Use information and communication technologies in professional activities» - 4) competence in the field of information technology; CC «Understanding the legal framework, being aware of oneself and one's place in society, tolerantly perceiving social, political, ethnic, confessional and cultural differences» - 6) social and civic competencies; 8) knowledge of culture and expression of cultural identity ..

Thus, some Kazakhstan people to some extent overlap with the key competencies of the EU.

Formation of basic and professional competencies is central to the development of a competitive personality and is one of the main tasks facing TVET institutions.

However, unlike the European approach, there is no legally established system of key competences for the TVET.

### D.3.6 Policies to strengthen quality assurance

In the RK, measures implemented by the MES RK do not allow a comprehensive approach to assessing the quality of education, as priority for the MES RK is only an external assessment.

The provision on the internal assessment of the quality of education, as well as the concept of an internal assessment of the quality of the education system in the legislation on education, is not disclosed at all, and the results of a selectively conducted external assessment of the quality of education do not allow the LEB to provide objective internal assessment and timely management decisions.

In practice, the assessment of the quality of education is formed not by the results of educational monitoring, but by the results of control measures within the framework of external control by the MES RK, CCES RK and its structural territorial departments (*certification of educational organizations*), as well as accreditation agencies. In TVET, only accreditation is carried out.

In accordance with the legislation, external assessment and external quality control of education are carried out at the republican level through the implementation of UNT, EIE and certification of educational organizations.

In the TVET until 2016, an assessment was made of the level of professional training of graduates by the RSMC. Since 2016, APC has been transferred to a competitive environment. College graduates undergo independent certification at certification centers (see B.1.2). However, not all colleges undergo a procedure for assessing professional preparedness and confirming compliance with a specialist's qualifications, since there is no document regulating the necessary completion of this procedure by college graduates.

Internal assessment and internal quality control of education is carried out by conducting ongoing performance monitoring procedures, intermediate and final certification at the college level.

To improve the level and quality of knowledge acquired by students and for effective management, a quality management system (QMS) is being introduced in some colleges, which fully complies with the requirements of national and international standards.

Presence of QMS in colleges is a guarantee of compliance with the quality management requirements for the training of specialists and staff at each stage, from career guidance for future students to the graduation and employment of graduates. The QMS model includes planning and applies the processes of monitoring, measurement, analysis and improvement in order to demonstrate the conformity of educational services to the requirements of the SCES, to ensure the conformity of the QMS and to constantly increase its effectiveness. However, QMS does not function in all colleges.

MES RK conducts educational monitoring on quantitative indicators of performance, the results of which are not able to ensure the adoption of managerial decisions at all levels of the education system to manage the quality of education.

Therefore, in matters of quality assurance, the voiced problems remain unresolved.

### III. Summary and analytical conclusions

**First challenge.** There are not enough qualified teachers in the production with knowledge of the basics of pedagogical skill.

*Factors on first challenge:* There is no appropriate pay system for mentors from production. There is no close link between education and production. Technical specialists in training in universities do not study disciplines related to pedagogy.

*Challenge solutions:* At the initiative of NCE «Atameken» a «School of Mentoring» was organized, where they provide advisory and methodological assistance to mentors. In colleges where DT is implemented, payment for tutors from production is provided.

*Progress in implementing solutions:* The NCE «Atameken» Human Resources Development Department, in a joint project with the Trier Chamber of Crafts, organizes training for enterprise mentors. NCE «Atameken» maintains a register of contracts and has created a mentor base, 95 training and resource centers for retraining specialists at enterprises, 2 consortiums, 9 industry clusters and 21 certification centers operate in the regions.

*Recommendations:* for colleges to provide methodological assistance to mentors to organize work on teaching mentors to best forms and methods of teaching, basics of pedagogy and psychology. For business leaders to create the necessary conditions for the mentor and school to work together.

**Second challenge:** TVET system lacks teachers and masters of VT.

*Factors on the second challenge:* Young specialists do not want to work in colleges because of the large amount of work. The level of salaries of teachers makes it difficult to attract specialists from production.

*Challenge solutions:* Teachers and specialists from the production of retirement age are involved in the educational process. In private, graduates are employed in the college where they studied, as teachers and masters of VT. At the same time, the college partially or fully pays for the training of a potential pedagogical worker at a university.

*Progress in implementing solutions:* To attract specialists from production, flexible ways of recruiting employees of companies of the respective branches are created for teaching in colleges.

*Recommendations:* To the management of TVET institutions systematize the work on the professional development of young teachers. Create conditions for attracting practitioners from enterprises. To motivate young teachers to organize (at regional and national level) the contest «The best young teacher of vocational education».

**Third challenge:** Since 2016-2017, no assessment of the level of professional training and qualification of TVET graduates has been carried out.

Factors on the third challenge: Lack of coordination between employers and educational institutions in assessing the quality of the TVET.

Challenge solutions: Some employers conduct qualification exams at the end of their final internship (in the form of independent certification). Holding WS championships affects the professional level of college students.

Progress in implementing solutions: As of 2018, 34 private organizations were in the register of certification centers of NCE «Atameken». In comparison with 2017, register was replenished with 12 centers. On a systematic basis, regional WS championships are held in all regions of the country, where business representatives are involved.

Recommendations: Employers, together with colleges, should make proposals on the procedures for certification and qualification of graduates. For employers to intensify the work of existing centers and create independent centers for assessment and assignment of qualifications by industry.

**Fourth challenge:** Teachers are not motivated to upgrade their skills.

Factors on the fourth challenge: There is no additional fee for the qualification category in colleges.

Progress in implementing solutions: The problem is being considered and discussed at the national level.

Recommendations: At the national level, provide an additional payment for qualification categories to teachers of TVET organizations.

**Fifth challenge:** Lack of proficiency in professional English, ICT and entrepreneurial skills of students and teachers. Some teachers are not well versed in working with people with SEN.

Factors on the fifth challenge: In TVET there are mainly students who do not expect to pass the final exam after eleven grade and have a weak level of knowledge, including in English and ICT. Most teachers did not receive fundamental training in English and ICT. Students and teachers did not learn the basics of entrepreneurship.

Challenge solutions: NC JSC «Holding «Kasipkor» holds courses for teachers on the CLIL methodology, the basics of entrepreneurship, information and communication technologies. Optional courses in basic and professional English are being offered. Specialists with knowledge of English are involved as experts on the international WS movement. In colleges, since 2018, the introduction of the basics of entrepreneurial activity began as an optional. NCE «Atameken» has been working on the implementation of the subject «Fundamentals of Entrepreneurship» since 2014. The course is held for teachers of a new subject, 1784 people will be trained.

Progress in implementing solutions: In 2018, 295 teachers of special disciplines use elements of the CLIL methodology in the lessons. In 2018, the percentage of teachers who taught special subjects in English was 0.9%. The course «Fundamentals of Entrepreneurship» is held for teachers of a new subject; by the end of 2019, 1784 people will be trained.

Recommendations: To regional DE develop a plan of activities for the teaching of special disciplines in English. Monitor to determine the level of proficiency in English among teachers of special disciplines and masters of VT. To regional ED provide for the organization of language training and internships of the ETS. Teachers of special disciplines to work in close connection with English teachers. In colleges, systematize work on optional language training for students.

Colleges to develop electronic textbooks, manuals, create digital educational resources / content for specialties and qualifications. To attract employers, social partners and representatives of business structures for the development of entrepreneurial skills among teachers and students. Organize PC

courses for teachers, seminars, trainings and other events with the participation of employers, businessmen on the development of entrepreneurial skills.

## Building block E: Governance and financing of VET

### E.1: Institutional arrangements

#### Identification of issues

#### E.1.1 Effectiveness of institutional and governance arrangements

Due to the fact that all government organizations of TVET are under the jurisdiction of the LEB, the main powers and management functions are concentrated in the departments of TVET. However, they have a limited number of employees (3-6 people), which does not allow to inform in a timely manner about the innovations introduced in the TVET policy. At the same time, in each region there are either training centers or training rooms that provide methodological and methodological support to colleges. For more systematic work, consider combining TVET departments of training centers and classrooms with TVET departments of ED.

TVET departments of regional DE are not directly subordinate to the MES RK. Due to the limited state, departments cannot always coordinate relevant inter-territorial, interdepartmental tasks of preparing labor resources and ensure the proper level of development of allocated funds for the development of TVET. The MES RK cannot directly influence the activities of educational institutions, and the establishment of relations between enterprises and employers, as almost all of them are run by the LEB.

All management decisions to support the activities of educational institutions (budgeting, financing, staffing, material and technical equipment, providing educational literature, attracting employers, etc.) are made at the local level.

Existing management mechanism is not consumer-oriented; it does not allow giving a real and accurate assessment of personnel training, what and how many personnel need to be trained, what and where to train them. There are many initiatives, activities, programs and projects for human resource development, but they are often not well coordinated with each other. The positive experience gained is used only at the level of the educational institution or the field, and is not disseminated through the relevant structures at the national level, since there is no mechanism for inter-sectoral institutional relationships.

There is no clear definition and distribution of responsibilities, roles and management processes that are understandable to a wide range of people. Main parameters of the control system are not always effective and efficient.

College is directly managed by the college director. Director and his deputies carry out planning and accounting of educational, educational, methodological, industrial and educational work. In order to improve the quality of training and education of students, pedagogical skills of teachers and improve methodological work in colleges, collegial management bodies are created. Forms of collegial management of the college are pedagogical, educational-methodical, and board of trustees.

Educational institutions have gained some experience in introducing modern methods of managing the quality of education. Practice of introducing education quality management systems in educational institutions in accordance with the requirements and recommendations of the ISO 9001:2001 quality management standard has expanded.



However, there are a number of problems in managing the quality of education in educational institutions, such as:

- poor provision of qualified managers at the level of management of the educational institution, the heads and administrative staff of educational organizations in the majority have no management education;
- lack of motivation for effective management, lack of personnel, logistical, scientific-methodical, financial, organizational, normative legal, information conditions;
- managers of TVET organizations are not accordingly prepared to work with partners from business structures, the culture of joint development of a common opinion on certain issues is not developed;
- work of the BT of educational institutions is not effective enough.

Thus, there are strengths and weaknesses in managing TVET.

Strengths:

- strategic directions of development of the TVET have been planned;
- distinction was made between powers, competencies and functions between levels of management;
- there are established traditions of hierarchical interaction between different levels of management;
- accountability of local, regional to the republican level of government;
- Independent system of assessment of the quality of educational services in the sphere of TVET is being implemented.

Weaknesses:

- vertical control structure is broken;
- lack of compliance with the principles of accessibility, transparency, democracy, feedback, rational centralization, coordinated management;
- unsuitability in a market environment for command-administrative, administrative management style;
- lack of managerial competence of the personnel of the TVET administration;
- lack of a mechanism for public recognition at the state level of young TVET specialists and social benefits;
- low concern of parties involved in the training management process.

### E.1.2 Accountability, leadership and control

Kazakhstan has a centralized education system with extensive central planning and a detailed system of norms. The government plays an important role in determining educational strategies and in developing key initiatives.

In Kazakhstan, the mechanisms of accountability, leadership and control are built from the bottom up. Colleges located at the bottom of this pyramid (except for colleges of republican significance) are accountable to regional DE, which, in turn, report to the LEB.

Despite the fact that the regional educational institutions are directly subordinate to the organizations of the LEB, MES RK directly controls the implementation of government programs and the quality of educational services.

National programs and events are initiated by the President of the RK, the Government, the MES RK and other branch ministries and are implemented by the LEB.

MES KR is the competent central authority for education: provides leadership and intersectional coordination in the fields of education, science, the protection of children's rights and youth policy; responsible for the implementation of the Law of the RK «On Education», for strategic planning, management and financing of the education system; regulates the development of curricula, educational plans and programs, student assessment system, management of the republican budget for specific programs; responsible for providing regulatory documents and monitors their implementation.

TVET departments of regional DE across the region are responsible for the development of the TVET system, coordinating the activities of both state and non-state colleges. They are also responsible for the implementation of educational reforms and for monitoring the planning and admission of applicants, whose training is financed from the local budget, coordinating the college budget and monitoring the services provided.

In addition, DE provides colleges with methodological, pedagogical, methodological and psychological services and provides continuing education for teachers. DE in regions are responsible for improving MTB of colleges, acquiring educational and methodological literature, for organizing free meals for certain categories of students, organize and conduct competitions, contests, olympiads etc. among EST and students.

Regional educational authorities regulating TVET are response to the MES RK for the quality of the provision of educational services, for the implementation of state programs in the field of TVET.

Colleges are independent in the implementation of the educational process, the selection and placement of personnel, scientific, financial, economic and other activities within the limits established by the legislation of the Republic of Kazakhstan. Other functions of their activities are defined in Article 43 of the Law of the RK «On Education».

College is directly managed by a director who is appointed to this position in a competition<sup>48</sup>. College management is carried out by the college administration, which includes deputy directors and heads of structural units of the college. Engineering and pedagogical workers, in accordance with their official duties, provide normative training, reporting and planning documentation to the chairman of the subject-cycle commission and the deputy director for educational, teaching and methodological work. Deputy directors monitor the quality of the educational process, the implementation of the curriculum and programs.

On approval of the Rules for competitive substitution of heads of state organizations of secondary, technical and vocational, post-secondary education and competitive appointment as heads of state organizations of education implementing general educational programs of preschool, secondary

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<sup>48</sup>Ob utverzhdenii Pravil konkursnogo zameshcheniya rukovoditelej gosudarstvennyh organizacij srednego, tekhnicheskogo i professional'nogo, poslesrednego obrazovaniya i konkursnogo naznacheniya na dolzhnost' rukovoditelej gosudarstvennyh organizacij obrazovaniya, realizuyushchih obshcheobrazovatel'nye uchebnye programmy doskol'nogo, srednego obrazovaniya i obrazovatel'nye programmy dopolnitel'nogo obrazovaniya [On approval of the Rules for competitive substitution of heads of state organizations of secondary, technical and vocational, post-secondary education and competitive appointment as heads of state organizations of education implementing general educational programs of preschool, secondary education and educational programs of further education], Order of the Minister of Education and Science of the Republic of Kazakhstan dated February 21, 2012 № 57.

education and educational programs of further education, Order of the MES RK dated February 21 2012 № 57.

Implementation of new projects, programs and other innovations is initiated by the President of the RK, Government, MES RK and is being implemented by the LEB.

Colleges of the RK have a low degree of autonomy. Their responsibilities include the distribution of students by group and specialty, the development of a strategic plan for the college, the creation of a team of leaders (except deputy directors) and the management of the teaching staff.

Educational organizations have collegial government bodies, which address the planning, monitoring and improvement of the educational system of the organization. This is a BT, pedagogical, methodological councils, meetings with director, which are held according to the rules of the college.

Each college has an internal college control plan, a strategic college development plan for 5 years. Every year, until September 1, work plans for educational, training, methodological, production work, quality services, faculty, departments, curators, individual work plans for teachers, masters of VT, development plans for classrooms, and further training plans for teachers and staff of the college are drawn up. The development of a process for measuring, monitoring and improving the most important results of activities through management analysis has been ensured.

In colleges, a quality management system (QMS) is being implemented, which meets the requirements of the international standard. The main document of the QMS of the college is the «Quality Policy», which defines the mission, vision, goals and objectives of the college. Analysis of reports of structural units, external and internal audits, and checks during internal control allow college leaders to identify inconsistencies in the work of departments and college services and develop corrective and preventive actions to correct identified inconsistencies.

National System for Quality Assessment of Education has been established, which includes elements of independent external evaluation (licensing, certification, accreditation, rating, final state certification of graduates, etc.).

In accordance with the Law of the RK «On Permits and Notifications», educational activities are subject to licensing. The issuance of licenses and (or) applications for the right to carry out educational activities is carried out by departments for control in the field of education.

State certification of all colleges is also carried out by departments for control in the field of education. State certification of colleges is carried out once every five years in a planned manner. In 2015, amendments and additions were made to the Law of the RK «On Education». The transition from state certification to independent accreditation of colleges and universities is legally regulated.

Since 2017, the MES RK annually ranks colleges of the Republic of Kazakhstan.

Model Rules for the organization of work of the Board of Trustees and the procedure for its election in educational organizations have been approved<sup>49</sup>

Board of Trustees have been set up in many colleges, which include representatives of local, executive and law enforcement agencies, employers and social partners, and parents. However, in the materials of the reports submitted by the colleges to the accreditation bodies, there is no information that would indicate the real participation of the BT in decision-making.

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<sup>49</sup> *Tipovye pravila organizacii raboty Popechitel'skogo soveta i poryadok ego izbraniya v organizaciyah obrazovaniya* [«Standard Rules for the Organization of the Work of the Board of Trustees»] Order of the Minister of Education and Science of the RK dated July 27, 2017 № 355

## Description of policies

### E.1.3 Governance reforms

At the national level, since the last TP round, there have been no significant changes in the institutional and management mechanisms. Main changes affected the management system only at the college level.

Order of the MES RK dated July 27, 2017 № 355. «Typical rules for organizing the work of the BT and the procedure for its election in educational organizations».

Since 2018, a pilot project has been implemented (in colleges of Pavlodar, Karaganda, North-Kazakhstan regions) to introduce per capita financing with the approval of cost rates for training one specialist. And from January 1, 2019, colleges from DT of the country switched to the mechanism of per capita financing. Autonomy in financial management of the college requires from directors they professional skills, knowledge of budgeting and accounting.

It is assumed that the introduction of per capita financing in TVET organizations will affect the improvement of the quality of education, the competitiveness of educational institutions, and the independence of colleges in spending budget funds. The advantage of per capita financing is that it clarifies the costing of tuition. It takes into account all the components for calculating the cost of training. Payment to the master-mentor is provided in the amount of 8318 tenge per student. With per capita funding, the amount of funding depends on the number of students, means, the mentor hours are paid per student multiplied by the number of students in the group<sup>50</sup>.

Boards of trustees are created in colleges to ensure transparency of college management and additional attraction of financial and material resources to support MTB and general activities in colleges<sup>51</sup>. Boards of trustees of college exercises public control over the observance of students' rights, as well as over the spending of charitable assistance, makes recommendations on priority areas for the development of educational organizations; hears the reports of the head of the organization of education, makes proposals to the LEB in the field of education on eliminating shortcomings in the work of the organization of education, etc. Thus, the BT does not have a real influence on decision making.

Another measure to improve the management of colleges is the recently proposed transfer of colleges to trust management.

For the transfer, it is planned to create a project office at the NCE «Atameken»; identify a list of potential companies and colleges for transfer; change the organizational and legal form of colleges upon transfer to trust management and increase the size of the state order, taking into account depreciation payments on transferred colleges to trust management.

This will allow, firstly, to update MTB of colleges, secondly, to reduce the burden on the budget, and thirdly, employers will have the opportunity to directly go into the educational process of training specialists and train specialists with relevant skills.

Improving the quality of management has allowed colleges to switch to new forms of management. According to the MES RK as of 01.10.2018, 61 colleges in the legal form became state enterprises on

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<sup>50</sup> Website [atameken.kz](http://atameken.kz)

<sup>51</sup> Tipovye pravila organizacii raboty popechitel'skogo soveta «Standard Rules for the Organization of the Work of the Board of Trustees». Order of the Minister of Education and Science of RK, dated July 27, 2017 № 355

the basis of economic management. The state enterprise, on the basis of the right of economic management, is maintained at the expense of its own income from its own activities. These colleges themselves determine the form of remuneration, staffing, size of salaries, bonus system, etc.

## E.2: Involvement of non-state actors

### Identification of issues

#### E.2.1 Distribution of responsibilities between state and non-state actors in VET

It is not possible to ensure the effective work of colleges without the participation of business. The country has measures to mobilize the participation of non-state subjects in terms of training personnel with TVET. Employer associations are responsible for developing professional standards and industry qualifications frameworks.

Employers, industry associations and other business structures take part in the formation of the state order, in the development DT graduates, in the certification of college graduates, training of teachers and masters in production and other reforms that are aimed at improving the TVET.

In Kazakhstan, on February 1, 2018, a General Agreement was signed between the Government, the republican associations of employers and the republican associations of trade unions for 2018-2020, which is aimed at facilitating the creation of new industries using digital technologies, expanding the competitive advantages of traditional basic sectors of the domestic economy through the introduction of elements of the Fourth industrial revolution, effective regulation of the labor market by ensuring a balance of supply and demand in conditions technological updating and digitalization of the economy and improving the efficiency of budget expenditures. It should also be noted that the obligations of the participants are indicated in the agreement, for example, the republican associations of employers have committed themselves to assist in the training of specialists with specialized industry skills, to stimulate the introduction of DT in enterprises and to spread the institution of mentoring, and to participate in the development and updating of educational programs.

Under the agreement, the parties agreed to promote the implementation of TVET reforms and policies: building students skills (IT, financial literacy and other social skills), financing, creating conditions for «lifelong learning», expanding PPP and attracting private investment in education, to promote the prestige and motivation of teaching staff, etc.

This agreement applies to government agencies, workers and their representatives, as well as to all employers, regardless of ownership.

Main representative of non-state subjects in TVET is NCE «Atameken». This union includes all accredited associations of small, medium and (or) large enterprises. As of 2019, 171 associations (unions) and 31 experts have been accredited in NCE «Atameken». All accredited associations and experts are included in the register of accredited associations and experts and are posted on the website NCE «Atameken»; (atameken.kz).

Non-state subjects include EMA by profiles that coordinate educational, educational, methodological and scientific-methodical work in TVET organizations. The main objective of EMA activity is the preparation of proposals and recommendations on the implementation of state policy in the field of TVET. Currently, EMAO by profile operate at the base of 66 colleges, regardless of ownership.

Colleges have youth committees that organize mass sports, scientific, educational work with students, as well as provide social support to students. The Youth Affairs Committees work in close cooperation with the DE. In addition, in Kazakhstan there are such youth organizations as «Zhas Otan», the youth movement «For the Future of Kazakhstan», the association of student youth «Alliance of Students of Kazakhstan», the Republican Youth Social and Political Movement «Kaysar», and the youth center

«Leader XXI». These youth organizations create conditions for the active participation of young people in the social, economic and cultural life of the country, closely cooperate with college students, and conduct various cultural and educational events on the basis of colleges.

Employers are actively involved in shaping TVET policy regarding the content of educational programs. The content of educational programs, the development of colleges through public procurement, employment of graduates and participation in adult education are resolved with the active participation of college associations, social partners, and employers.

Therefore, the non-governmental sector (employers, students and graduates) is making efforts to participate in the life of the regions and the country as a whole, especially with regard to the content of education and the formation of a development and support strategy for students. The participation of employer representatives at the national level is regular and formalized.

MES RK interacts with other branch state bodies in the implementation of the strategy for the formation of state policy in the field of education and science, in particular, regarding the functioning of an effective system of technical and vocational education integrated into the world educational space, improving the quality of training and competitiveness of staff, developing social partnership and other

At the regional level, LEB conduct strategic, medium-term economic, budget planning. They approve programs for the development of education in the region, decide on reduced fare for students on public transport, and develop and submit for approval of the maslikhat, programs for the development of education (E 1.3).

Distribution of functions and responsibilities between state subjects is suitable and transparent for all participants. Non-state subjects are also involved in taking responsibility for training in the TVET system.

## Description of policies

### E.2.2 Policies in support of participation of non-state actors

Since 2018, Investor Partnership Roadmap for the Development and Improvement of TVET<sup>52</sup> is being implemented, which provides components for the development of partnerships with investors both domestic and foreign, the improvement of the quality of pedagogical personnel and the updating of content, as well as the development of a system for recognition of qualifications and certification of skills.

Within the confines of the Roadmap as of July 2019, 6 centers of competence were established by industry together with foreign investors in the areas of: construction, mining and metallurgy, agricultural, oil and gas, mining and metallurgical industries.

24 state councils / commissions have been created under state bodies. NCE «Atameken» accredits industry associations. In 2016, the total number of associations (unions) accredited in the National Chamber was 126; in 2017, 28 associations (unions) were accredited; in total, 172 associations (unions) are currently accredited to NCE «Atameken». Industry associations participate in TVET policy discussions.

In 2015, Law of the RK «On Public-Private Partnership» (with amendments and additions as of April 3, 2019) was adopted, which sets the rights and obligations of public and private partners, state regulation in the field of PPP, forms of participation in PPP, general provisions by definition of a private partner and features of legal regulation.

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<sup>52</sup> *Dorozhnaya karta partnerstva s investormi po razvitiyu i sovershenstvovaniyu tekhnicheskogo i professional'nogo obrazovaniya* [Roadmap of investor partnership for the development and improvement of technical and vocational education]



In Kazakhstan PPP Project Support Center under the MNE RK was established. The team of professional experts and analysts in the field of PPP has implemented more than 30 unique PPP projects to date. The Center implements projects on such areas as education, health, energy, culture and sports, housing and social facilities, telecommunications, transport and infrastructure, and others. In the field of education, 271 contracts have been concluded for the amount of 74 billion tenge. (Source: PPP project Support center [pppcenter.kz](http://pppcenter.kz)).

For 2018-2019, as part of the PPP, it is planned to build a vocational-technical lyceum for 600 places with a dormitory for 200 places in the «SPMK-70» area of the city of Kyzylorda. Currently, work is underway to adjust the concession proposal, to develop tender documentation and a draft concession agreement.

In addition, since the beginning of 2019, work has been ongoing to discuss the transfer of colleges to the business structure through trust management without the right to buy out. According to the MES RK, there is now experience transferring 5 colleges to trust. Of these, 3 colleges in the Pavlodar region, 2 colleges in the Almaty region. This measure will enable colleges to build management on the result and on the implementation of a new financing model, while business will benefit from orienting the learning process to providing for its own staffing needs and the ability to optimize the staff of enterprises at the expense of practicing students. But, it is also necessary to take into account the opposite effect of this measure, due to the fact that enterprises will attract their employees as masters of VT, mentors, it is likely that teachers will be left without work.

## E.3: VET budget

### Identification of issues

#### E.3.1 Expenditure planning, VET budget formation and execution

Process of forming a budget application both at the republican and local levels is carried out in accordance with the Budget Code<sup>53</sup> and the Rules for the preparation and submission of a budget application<sup>54</sup>.

Roadmap of investor partnership for the development and improvement of technical and vocational education.

Colleges of the country have two main sources of financing: the state budget and private financing.

State budget is divided into republican and local. The costs of the TVET system are financed both from the republican and local budgets. On the balance of the republican budget of the MES RK financing is provided for only 2 colleges of the country («APEC PettoTechnic» High College in Atyrau, College «Samopoznanie» in Almaty) and the implementation of the «Enbek» program.

It should be noted that the provision of state services to 463 colleges on the provision of the LEB which are responsible for financing and providing the current budget for construction, capital and ongoing repairs, equipping the MTB, training students, paying salaries to teachers and masters of IT, etc.

Mechanism for compiling a republican and local budget application is single. The preparation of a budget application at all levels is based on the volume of expenditures of both level of expenditure and

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<sup>53</sup>Budget Code of the Republic of Kazakhstan Code of the Republic of Kazakhstan dated December 4, 2008 № 95-IV

<sup>54</sup> On approval of the Rules for the preparation and submission of a budget application Order of the Minister of Finance of the Republic of Kazakhstan dated November 24, 2014 № 511

the new initiatives and is based on expenditure limits and a report on the implementation of the strategic plan for the previous financial year.

Republican budget application of the MES RK for the development of TVET is compiled by the Department of TVET together with the departments of budget planning (DBP) and financing (DF) of the MES RK. The formed budget application of the MES RK is submitted to the MNE and MF for approval, then to the republican budget commission for decision-making and consideration in the Mazhilis. The budget application approved by the Mazhilis is accepted for execution by the DGRK.

Local budget is formed in accordance with the Budget Code, the republican budget and approved by regional maslikhats.

Colleges form and make up the expenses planned for the training of TVET personnel in accordance with the messages of the Head of State, instructions and other initiatives and reforms in TVET, as well as with the strategic plan of colleges and submit to the department of planning and economic work of the DE. Representatives of the DE send the budget request to the akimats, where the final decision is made by the maslikhat.

Adjustments to the budget and its implementation are carried out by colleges and, when changes are made, they are brought to the departments of economic planning and accounting and public procurement.

It should also be noted that a budget application is being formed and compiled for the upcoming three-year period. Such a formal approach requires repeated refinement and adjustment during the financial year.

A private source of funding for TVET is tuition fees (for 2018, 43.6% of students study on a paid basis) and other paid educational services (conferences, seminars and short-term courses). Revenues from private sources are provided to improve MTB of colleges and improve the professional skills of teachers and masters of VT.

## Description of policies

### E.3.2 Policies to improve expenditure planning and budgeting in VET

In the RK, state financial planning of expenditures and budget of the TVET system is an integral part of state socio-economic planning and a subsystem of the financial mechanism and represents the legislatively regulated activities of specialized planning and financial, as well as other authorized bodies of the state for the development, consideration, approval and execution of financial plans.

Basis of financial planning is the budget process, which is the legislatively regulated activity of authorized planning and financial bodies for the development and preparation, consideration of the draft republican and local budgets, approval of the republican and local budgets and the organization of their implementation, control over their implementation, conclusion of the republican and local budgets<sup>55</sup>. Functions of the central authorized body for budget execution relate to the Ministry of Finance of the Republic of Kazakhstan, the functions of local authorized planning and financial bodies relate to the LEB.

In the framework of financial planning, the budget is formed on the basis of the goals and planned results of state policy, while responsibility for decision-making is delegated to the lower levels. For example, to improve the processes of expenditure planning, the formation and execution of both the republican and local budgets in accordance with the Budget Code and the Rules for the preparation of

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<sup>55</sup> Budget Code of the Republic of Kazakhstan. Code of the Republic of Kazakhstan dated December 4, 2008 № 95-IV

the budget application<sup>56</sup>, an opportunity is provided in the form of adjustments and refinement of budgets during the corresponding financial year by making changes and additions taking into account the proposals of colleges. This is aimed at eliminating the situation that threatens the inefficient distribution and use of budget funds. In addition, an assessment of the activities of budget administrators is carried out based on the results achieved.

The implementation of this approach provides that each budget cycle begins with a review of the main parameters of the medium-term financial plan for the corresponding fiscal year previously approved in the previous budget cycle, analysis of changes in external factors and conditions, justification of changes made to the main budget indicators of the planned year, as well as adjustments or development of budget designs for subsequent years. In that connection, it was essential to include in the medium-term financial document, in terms of results-based budgeting, an annual allocation of appropriations for the three-year period to the administrators of the budget. This extends the period of budget planning, creates incentives for optimizing budgetary expenditures, promotes the formation of a system of indicators of budgetary expenditure performance, increases the objectivity of evaluation of college activities, accelerates preparation and improves the quality of the budget project, both local and republican.

In order to improve the planning processes of financing in the TVET system, the spending of budgetary funds is aimed at the policy on the transition of colleges to a mechanism of per capita financing, which will allow to establish transparency and uniform approaches in the planning of budgetary expenditures.

## E.4: Mobilisation of resources for VET

### Identification of issues

#### E.4.1 Sources and mechanisms of funding for VET

State funding involves ensuring that the state allocates annual budgetary allocations for education, taking into account its priority. The amount of allocated funds should ensure the functioning of the educational institution in accordance with the SCES.

According to the Law of the RK «On Education» (Chapter 9, Article 61), state expenditure on education is formed from the expenses of the republican and local budgets, as well as other sources of financing. Sources of financing of state colleges: 1) budgetary financing of maintenance of state educational institutions; 2) budgetary financing of state educational order; 3) incomes from rendering of paid services, not contradicting legislation of the RK; 4) credits of banks of the second level; 5) sponsorship and charitable assistance, gratuitous contributions and donations, grants.

Revenues from the sale of services provided under the state educational order, remaining as a result of the financial and economic activities of educational organizations for the current financial year, are used by them in the next financial year.

Sources of financing for non-governmental organizations of TVET: 1) financial resources of founders 2) budget financing of the state educational order; 3) income from the provision of paid services that do not contradict the legislation of the RK; 4) loans of second-tier banks; 5) sponsorship and charitable assistance, gratuitous deductions and donations, grants.

Main source of funding for state colleges is the funds of the republican and local budgets. Colleges receive income from the provision of paid services, as well as through charity, gratuitous deductions

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<sup>56</sup> Order of the Minister of Finance of the Republic of Kazakhstan dated November 24, 2014 № 511 «On approval of the Rules for the preparation and submission of a budget application»

and donations. One of the indirect sources of financing is loans from financial institutions to students through educational loan programs, for example, Financial Center JSC, together with second-tier banks, implements an educational loan guarantee program.

In the structure of budget expenditures in 2018, 17.1% accounted for education (1.9 trillion tenge). For example, in 2016, the state budget expenditures on education amounted to 1.6 trillion tenge, an increase of 22% compared with 2015. In the structure of the state budget, education costs annually amount to at least 17-18% of all costs and are in second place after spending on social assistance and social security.

College budget programs are administered by local governments. In accordance with article 6 of the Budget Code of the RK, the regional budget, the budgets of the city of republican significance, the capital, the budget of the district (city of regional significance) relate to local budgets. In 2018, the share of financing from the local budget amounted to 3% of the state budget (*Source: Statistics Statement of the Ministry of Finance of the Republic of Kazakhstan as of February 1, 2019, № 1*).

In case if the local budget is not enough to finance education, then transfers from the republican budget are sent to these regions. In accordance with Article 46 of the Budget Code of the RK, all transfers from the republican budget to education are targeted and are sent in the necessary amount for the implementation of specific programs.

Education in all colleges in the first working profession is free in accordance with the project «Free TVET». State colleges are funded from the local budget and republican transfers. Financing on the basis of an educational state order is carried out regardless of the legal form of colleges. The cost of training per year for one student according to the current methodology in 2018 is 373.8 thousand tenge.

As of January 1, 2019, 214841 students were enrolled in colleges of the country due to the state educational order. The amount of funding for these students amounted to 81,484,426 tenge.

In Kazakhstan, out of 821 colleges, 342 are private colleges. Private colleges operate on equal terms with state. The contingent of students in private colleges as of October 1, 2018 is 209189 people. Of the 488,712 students enrolled in the 2017-2018 academic year, 56% of students study on a paid basis.

In college, tuition of one student on a paid basis costs parents from 100 thousand to 380 thousand and the average cost of education per year per student is 240 thousand tenge.

Legislation permits the use of additional sources of financing, including employers' funds on the basis of PPP. PPP is an additional mechanism for financing college infrastructure. For example, a project for the construction of student dormitories, based on the principles of PPP, provides an opportunity for investors to provide a return on investment, as well as to leave the property in the ownership for further business development. The return of investment is guaranteed by the state in the format of placing a targeted state order (according to the Kazakhstan PPP Center, 2018).

College sponsorship and charitable donations are not planned, as this assistance is voluntary and intermittent. Colleges provide a report on the receipt and expenditure of proceeds from sponsorship, charitable assistance. These revenues are spent by colleges for their intended purpose.

In call of the need to ensure transparency in the use of funds received as sponsorship and charitable assistance in colleges, BT have been created, which are a form of collegial management and interact with the college administration, parent committee, LEB, employers and other interested parties. These boards act as mechanisms to promote the equitable distribution of sponsorship contributions.

Charitable assistance mainly goes to equipping classrooms with interactive whiteboards, computers, furniture, providing social assistance, etc.

It is not possible to determine the share of the contribution of non-governmental, private organizations, enterprises, social partners to the budget of colleges, since financing of colleges by private organizations is not regulated by regulatory documents.

Colleges cannot generate their own income, except for the provision of paid educational services. Although the presence of MTB, laboratory facilities, human resources allow colleges to produce products for sale in order to obtain additional profit.

## Description of policies

### E.4.2 Diversification and mobilisation of funding for VET

Government policy in the field of education is aimed at diversifying the sources of financing TVET system. In accordance with the Strategic Plan for the Development of the RK until 2025 (Decree of the President of the RK dated February 15, 2018 № 636), «PPP and attracting private investment in the field of education» were singled out as one of the initiatives. This initiative is an important tool to improve the quality of educational services, reduce the burden on public education facilities, the lack of places in educational institutions, and the development of private educational services.

PPP is a mutually beneficial cooperation of state bodies and entrepreneurs in industries traditionally related to the sphere of responsibility of the state, on the basis of a balanced distribution of risks, benefits and costs, rights and obligations defined in the relevant agreements.

Legislation in the field of PPP is based on the Constitution of the RK, the Civil Code, the Law «On Public-Private Partnership» and other regulatory legal acts of the RK, determines the legal conditions of PPP, the ways of its implementation and regulates public relations arising in the process of preparation and implementation of the project, conclusion, performance and termination of the contract. PPP by the method of implementation is divided into institutional and contractual. Institutional is implemented by the PPP company in accordance with the contract. The contract is implemented through the conclusion of the contract, including in the following forms: «... 2) trust management of state property; 3) property hiring (leasing) of state property; 4) leasing;...»<sup>57</sup>

Tasks of PPP in the field of TVET: involvement of the private sector in the management of public assets; reduction of financial burden on the budget; attraction of investments; expansion of models of interaction between the state and business. To ensure the implementation of these processes, a PPP Project Support Center was created.

Currently, the implementation of PPP projects in the TVET system is underway. The business shows a certain interest in the development and management of joint projects aimed at improving the training of workers. As part of attracting private funding, it is planned to organize the interaction of colleges and companies. Partnership contributions from companies will include assistance in equipping workshops and training grounds, the possibility of internships, a mentoring system, the provision of sites for training and practical training events; meaning is, equipping MTB colleges from private sources. Within the framework of the state program for the development of education for 2016-2019, PPP projects are being implemented for the construction of dormitories of colleges.

In order to attract financing from private sources, reduce the burden on the budget, in the field of TVET, transfer to trust management of colleges to large enterprises is being implemented. In 2017, the MES RK, approved the Roadmap for the implementation of trust management of organizations implementing TVET programs.

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<sup>57</sup> Law «On Public-Private Partnership» dated October 31, 2015 № 379-V RK, Art. 7.

Currently, in the framework of the program for transferring colleges to trust, the issue of changing the form of ownership of colleges from the State Committee for Civil Protection, SUC to JSC or LLP for the transfer of voting shares (stakes in the authorized capital) of legal entities to autonomous educational organizations, the National Chamber of Entrepreneurs of the RK, is being discussed and legal entities included in its system, for transferring an object to trust management without the right of subsequent redemption in compliance with the requirements of existing legislation (SAM «On state property»; Order of the MNE of the RK dated January 16, 2015 № 17» Rules for the transfer of state property to trust «).

Obligations of trustees include the co-financing of college activities and the creation of additional services to increase revenue from extra budgetary sources, which significantly reduces the costs of the local budget for financing TVET.

Since January of this year, a per capita financing mechanism has been introduced in colleges with DT, which provides for the transition from financing the costs of educational institutions to financing the costs of training students, depending on their number, on the principle of «money goes for the student.»

This will increase competition between educational organizations and the quality of educational services. At the same time, the state educational order is placed in colleges regardless of the form of ownership, which will motivate the private sector to expand the network of private colleges. Sanitary rules and norms (SanPiN) and Building regulations (BR) of colleges will be revised, which will save money on the maintenance of college infrastructure.

JSC «Financial Center» together with second-tier banks implements the Program for guaranteeing educational loans (GEL). GEL system is designed for those who study at paid college departments. Loans are granted in tranches in the amount of tuition per semester. Second-tier banks participate in the GOK system: «Nurbank» JSC, «Tengri Bank» JSC, «Forte Bank» JSC, «Sberbank» JSC. At the same time, each of the partner banks has developed its own lending program to pay for training with the conditions and requirements for the borrower.

## E.5: Allocation and use of resources in VET

### Identification of issues

#### E.5.1 Patterns of resource allocation

According to Article 62 of the Law of the Republic of Kazakhstan «On Education», the state ensures the allocation of budgetary funds for education, taking into account its priority.

Normative legal acts regulating the management of educational assets are the Constitution and its article № 30, the Law «On Education», the Law «On Minimum Social Standards and their Guarantees»<sup>58</sup> and other regulatory documents.

In Kazakhstan, TVET organizations are divided into republican, state and private. According to the Model rules for activities of types of TVET<sup>59</sup> Organizations, colleges are independent in shaping their

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<sup>58</sup> Law of the Republic of Kazakhstan dated May 19, 2015 № 314-V ЗPK. On the minimum social standards and their guarantees <http://adilet.zan.kz/rus>

00 Order of the Minister of Education and Science of the Republic of Kazakhstan dated September 11, 2013 № 369

<sup>59</sup> Order of the Minister of Education and Science of the Republic of Kazakhstan dated September 11, 2013



structure and in financial and economic activities. The delegation of authority to the regions contributed to the operational and financial independence of state colleges.

Colleges receive state funding from regional authorities in the framework of agreements and are free to receive income from the provision of TVET services in the market. However, they are not entitled to receive income from renting their premises and from selling any products, with the exception of educational services in the field of TVET, therefore a large proportion of financing is based on state orders.

According to the rules of placing a state order for the training of specialists with TVET education, a state order is placed in colleges regardless of the form of ownership and departmental subordination, taking into account the sectorial and regional needs for personnel. The composition of the commission on the placement of state orders includes representatives of sectorial state bodies, maslikhats and akimats, NCE, public organizations.

According to the MES RK on the financing of public procurement, it is clear that the more students means more funding. Most of all students are under the state order in Almaty, East Kazakhstan and Kostanay regions (Table 36).

**Table 36. The volume about financing of the state order in the TVET**

No	Region	The contingent of students as of 01.01.2019	Average actual cost per 1 student per year, tenge *	The amount of financing by actual cost, thousand of tenge
1	Akmoly region	1886	505 229	5 103 779
2	Aktobe region	1278	319 759	3 601 102
3	Almaty region	15520	370 492	5 660 050
4	Atyrau region	7024	449 684	2 832 020
5	West Kazakhstan region	1852	393 954	4 713 752
6	Zhambyl region	12004	365 034	4 202 382
7	Karagandy region	3780	530 756	4 060 722
8	Kostanay region	20767	373 443	7 557 303
9	Kyzylordy region	13182	392 540	4 982 242
10	Mangistau region	3607	500 235	4 311 012
11	Turkestan region	10375	410 854	5 090 466
12	Pavlodar region	10061	424 590	3 965 975
13	North Kazakhstan region	3444	477 817	3 188 977
14	East Kazakhstan region	21992	357 598	7 366 422
15	Nur-Sultan city	10465	372 728	3 584 860
16	Almaty city	24613	293 959	7 422 174
17	Shymkent city	7991	428 553	2 841 189
	<b>total</b>	<b>214 841</b>		<b>31 484 427</b>

Source: MES RK

\* - Costs in the regions differ for the following reasons: a different number of colleges in the regions, which affects the cost of their maintenance; profile of specialties for which training is being carried out as part of a state order in the region provides for various expenses.

Financing of state educational organizations is carried out at the expense of budgetary funds on the basis of requirements established by the SCES on educational levels and norms defined by the legislation of the RK. Government spending on education from GDP in 2015 was 2.8%, in 2016-3%, in 2017 - 2.9% (Source: *World Data Atlas*). However, in order to achieve 4th goal of sustainable

development - quality education, the UN recommends purposefully increasing funding for education and allocating at least 4-6% of GDP for its needs.

Main sources of financing are the republican and local budgets. According to the Budget Code of the RK (art. 54.), the expenses of the regional budget are carried out in the field of TVET in the following areas: the purchase and delivery of textbooks and teaching materials; training specialists with TVET, with the exception of those funded from the Republic of Belarus; advanced training and retraining of employees of state organizations financed from budgetary funds at the local level; MTB support of state educational organizations that implement professional curriculum of TVET (with the exception of educational organizations in correctional institutions of the penal system); state support of TVET for orphans, children, children with disabilities, their compulsory employment and provision of housing; free and reduced-price meals for certain categories of students in the manner prescribed by law; fulfillment of state obligations on PPP projects adopted by the maslikhat of the relevant field; compensation of expenses under a contract of trust management of state property.

From the regional budgets are financed the costs of capital expenditures of state colleges, as well as the costs of retraining and advanced training of teachers.

TVET financing mechanism at the local level takes into account the following types of mandatory expenses: compensation, payment of health benefits for annual paid vacation and employer contributions for taxes and other mandatory payments to the employees' budget; Compensation of fee of mentors in the workplace during the implementation of DT; organization and implementation of the educational process; expenses associated with the organization of practical training and industrial training, the passage of educational, technological and undergraduate practice; Communal expenses; expenses for paying for postal and telephone services, Internet services; expenses for maintenance, maintenance and servicing of buildings, structures, technological equipment, computer and office equipment, interactive systems; the acquisition of goods necessary to support the activities of educational organizations with per capita regulatory funding that are not used in the educational process; purchase of medicines and other medical supplies; rental costs of premises; payment of banking (financial) services.

Therefore, TVET organizations are mainly supported by the local budget and at the local level the cost of education is much higher than at the national level - they make up from 26% to 28% of the total budgets (Table 37).

**Table 37. Actual costs of local budgets for education, m. tenge**

cost article	2014	2015	2016	2017	2018
Total costs of local budgets	1 017 374	982 909	1 358 945	1 237 596	1 268 348
Education costs	267 212	262 468	361 373	346 691	342 618
the share of education costs in the total budget, %	26,3	26,7	26,6	28,0	27,0

Source: statistical statement of Ministry of Finance

It is on LEB that the primary responsibility lies for allocating funds and financing educational assets of the state. Most of the funds are spent on secondary education because of its duration and universal coverage. The standard distribution of the local budget by education level is as follows:

**Table 38. Distribution of the local budget by education level for year 2018**

secondary education	pre-school education	TVET	other educational services
55%	12%	12%	11%

(Source: statistical statement of MF)

Despite the fact that education is associated mainly with the MES RK, actually there is 13 departments spend money on education. If we consider the costs of the republican budget for 2018, we can see

that the first largest budget, of course, is at the MES RK (49.7%), then at the Ministry of Culture and Sports (28.4%), in third place is the Ministry defense (12.8%) and the latter - Ministry of Health (9.2%) (Source: statistical statement of MF RK)

Annual financing plan is drawn up on the basis of the calculation of expenses for the budget program (subprogram) presented as part of the budget application by administrators of budget programs, approved by the budget commission and finalized taking into account decisions made during approval (clarification, adjustment) of the budget. Then it is approved by the authorized body for budget planning and transferred to the authorized body for budget execution, and is also sent to administrators of budget programs in accordance with the Agreement. The college budget is planned in accordance with the rules for the preparation and submission of a budget application for one calendar year in accordance with the contingent at the beginning of the planned year.

Distribution of funds in the college is carried out in accordance with the approved cost estimate for the current year. The cost estimate takes into account the main directions of college development, provided for in the development strategy, the enrollment of students is compiled on the basis of approved financial standards.

Expenditure side of the budget includes the costs of performing work and the provision of services, which is grouped in accordance with their economic content. In general, the distribution and use of financial resources ensures the implementation of the main activities of the college.

In 2017, financing MTB for colleges amounted to 1 504 144.2 thousand tenge, which is 2.3 times higher than in 2016 (644 284.8 thousand tenge). A comparative analysis of the MTB equipment of the colleges indicates a positive trend in the increase in the number of classrooms, laboratories, workshops, car (tractor) dromes in 2018 compared to 2016 (Table 39).

**Table 39. Equipment of colleges with MTB, unit**

Classrooms		Laboratories		Workshops		Number of auto (tractor) dromes	
2016	2018	2016	2018	2016	2018	2016	2018
19869	21492	3476	3601	2478	2659	240	221

Source: SC MNE

## Description of policies

### E.5.2 Policies to ensure adequacy of resources for VET and equity in their allocation

MES RK is responsible for the strategic planning, management and financing of the TVET system, including the preparation of draft budgets, for the implementation of the Law of the RK «On Education». Therefore, the task of ensuring a sufficient amount of resources for TVET and their fair distribution is the prerogative of the MES RK.

Ministry also regulates the allocation and management of certain financial resources (namely, targeted transfers and republican budgets for specific programs and projects). At the national level, information and details about the budget and financial activities are provided to a limited extent. The MES RK is making efforts to increase transparency by creating an official website and encouraging similar actions by state educational institutions.

As an effort to address the financial needs of the TVET system, ensuring the fair distribution of financial resources, the country is working to introduce per capita financing in colleges with DT. The introduction of the proposed new financing model will help the TVET system move toward a more efficient, transparent and equitable financing scheme. In support of the implementation of the per capita funding model, the work of the BT will be directed. The BT at the college participates in the distribution of financial resources received in the organization of education in the form of charitable

assistance and makes a decision on its target spending, develops proposals when forming the budget of the organization of education. The role of BT will increase with the transfer of colleges to the trust management of enterprises.

Next measure aimed at ensuring an adequate amount of resources for TVET is the obligation of subsoil users to finance the training of Kazakhstan personnel in the manner approved by the Ministry of Investment and Development of the Republic of Kazakhstan in conjunction with the MES RK<sup>60</sup>. Kazakhstan personnel are trained in one or more of the following ways:

- financing for the purposes of training, retraining, advanced training of subsoil user workers who are citizens of the RK including in their own training (educational) centers with a legal entity that is a subsoil user;

- financing for the purposes of training, retraining, advanced training of citizens of the RK who are not employees of the subsoil user;

- acquisition, according to the information provided by the LEB and agreed with the competent authority, of the list of goods, works and services necessary to improve the MTB of educational organizations engaged in training personnel in specialties directly related to the sphere of subsoil use.

- a subsoil user can also provide financing for the purposes of training, retraining, and advanced training of the following categories of citizens of the RK who are not subsoil user employees: disabled people of groups 1, 2, and 3; orphans and children left without parental care, under the age of twenty-one years, having lost their parents before adulthood; families with many children; single-parent families.

### III. Summary and analytical conclusions

**First challenge.** The main parameters of the system of governing bodies and TVET organizations are not always effective and efficient. This makes it difficult to make a real and accurate assessment of personnel training in order to determine which and how many personnel need to be trained, what and where to train them.

*Factors on the first challenge:* Poor provision of qualified managers at the level of educational institution management, the heads and administrative staff of educational organizations in most do not have a management education. Managers of TVET organizations are not adequately prepared to work with partners from business structures, the culture of joint development of a common opinion on various issues is not developed. Lack of adherence to the principles of accessibility, transparency, democracy, feedback, rational centralization, and coherent management. Low parties concerned in involvement of the training management process.

*Challenge Solutions:* Since 2016, MES RK has begun training the heads of TVET in the basics of modern management. The implementation of the QMS has begun, which provides for certain requirements for college leaders. Within the framework of DT, a system of relations between education and business structures is developing.

*Progress in the implementation of solutions:* National system for assessing the quality of education is being developed, which includes elements of an independent external evaluation of the results of work of TVET managers. The issue of transferring colleges to trust management as a measure to increase

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<sup>60</sup> *Ob utverzhdenii Pravil finansirovaniya obucheniya kazahstanskih kadrov v razmere odnogo procenta ot raskhodov na dobychu, ponosenykh nedropol'zovatelem v predydushchem godu* [On approval of the Rules for financing the training of Kazakhstani personnel in the amount of one percent of the mining costs incurred by the subsoil user in the previous year] Order of Minister of Investment and Development of the Republic of Kazakhstan dated May 16, 2018 № 333 and Minister of Education and Science of the Republic of Kazakhstan dated May 22, 2018 № 217

the effectiveness of college management and create a real interaction between education and business structures is being considered.

Recommendations: To increase the financial and managerial autonomy of colleges by granting more autonomy. In order to involve parties concerned in the training management process, enhance the role of the BT and Industry Council.

**Second challenge.** Most colleges cannot generate their own revenues, except for the provision of paid educational services from the organizational and legal form of ownership. Although the availability of material and technical base, laboratory base, human resources allow the production of products for sale in order to gain additional profit.

Factors on the second challenge: There is no legal framework that allows the college to sell products.

Challenge Solutions: We are considering the transfer of trust management colleges.

Progress in the implementation of solutions: The organizational legal form of colleges (61 colleges) has been changed, which allows to generate and use own revenues independantly determine the form of remuneration of employees and staffing table.

Recommendations: make changes to the legal act regulating the activities of colleges, including changing the form in order to expand opportunities for providing additional services for profit.

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## APPENDICES

### APPENDIX 1. MANDATORY INDICATORS OF THE RESEARCH

Indicator 1. The number of the TVET organizations represented by type of ownership

	2014	2015	2016	2017	2018
Total	820	807	817	824	821
state	467	462	473	477	479
non-state	353	345	344	347	342

Source: NEDB

Indicator 2. The number of the TVET students represented by gender and territorial affiliation

Region	2014	2015	2016	2017	2018
Total	532 910	498 965	488 926	489 337	489 818
Male	276 684	260 751	258 279	260 376	260 774
Female	256 226	238 214	230 647	228 961	229 044
Urban area	480 414	450 301	439 913	436 414	437 257
Rural area	52 496	48 664	49 013	52 923	52 561

Source: SC MNE

Indicator 3. The number of the TVET students in accordance with educational profiles.

The title of education profile	2014	2015	2016	2017	2018
0100000 Education	86 734	84 885	77 755	76 060	74 882
0200000 Jurisprudence	29 693	24 307	21 349	19 928	18 645
0300000 Medicine, Pharmacy	76 647	78 908	76 181	78 051	79 195
0400000 Art and culture	14 609	14 308	13 942	13 720	14 490
0500000 Service, Economics and Management	79 147	71 728	66 442	61 981	60 880
0600000 Metrology, standardization and certification	1 695	1 266	1 169	1 172	967
0700000 Geology, mining and mineral extraction	9 683	8 512	7 813	7 672	8 069
0800000 Oil and gas and chemical industry	16 154	15 344	12 915	11 171	9 501
0900000 Energy. Power industry	22 913	21 725	20 591	20 354	20 012
1000000 Metallurgy and machine building	6 136	5 552	5 204	5 440	5 905
1100000 Transport (by industry)	29 641	29 396	28 615	28 189	28 634
1200000 Manufacture, installation, maintenance and repair (by industry). Exploitation of transports	64 424	61 616	57 972	58 436	61 094
1300000 Communication, telecommunications and information technology. Electronic Engineering	57 839	51 670	47 090	43 120	41 513
1400000 Construction and Housing and Utilities.	29 638	28 467	28 386	28 839	28 714
1500000 Agriculture, Veterinary and Ecology	36 231	35 226	33 541	34 793	36 836

Source: NEDB

Indicator 4. Public expenditures on TVET within the local budget

	The local budget spending on education	The spending on TVET, thousand tenge.	
	Total	Total	The proportion of the spending for TVET from the expenses of the local budget
2016	4 203 262 355,3	98 840 766,0	2,35%
2017	4 613 266 000,0	106 286 635,6	2,30%
2018	4 720 271 900,0	127 998 326,9	2,7%

Source: NEDB

Indicator 5. Public expenditure on vocational education (as percentage of GDP)

	2014	2015	2016
Expenditure on TVET	0,2%	0,2%	0,2%

Source: NEDB

Indicator 6. The share of funding of the TVET from state source.

	2014	2015	2016	2017	2018
State funding source	10%	10%	9%	10%	10%

Source: NEDB

Indicator 7. Total population

	2013	2014	2015	2016	2017
Total	16 910 246	17 160 855	17 415 715	17 669 896	17 918 214
Male	8 158 902	8 284 613	8 413 101	8 541 800	8 668 478
Female	8 751 344	8 876 242	9 002 614	9 128 096	9 249 736

Source: SC MNE

Indicator 8. The rate of population growth

Region	2014	2015	2016	2017	2018
Total, persons	254 860	254 181	248 318	239 123	279 513
Growth rate	1,62%	1,52%	1,55%	1,55%	1,55%

Source: SC MNE

Indicator 9. GDP - growth rate

	2014	2015	2016	2017	2018
Growth rate of GDP	2,9%	2,3%	1,8%	4,0%	4,1%

Source: website of the MNE

Indicator 10. GDP per employed person

	2014	2015	2016	2017	2018
GDP per employed person	46918,3	47094,55	47299,27	47317,15	no data

Source: World Bank Database

Indicator 11. GRP per capita

Region	2014	2015	2016	2017	9 months of 2018
The Republic of Kazakhstan	2 294,8	2 330,4	2 639,7	2 943,9	2 179,5
Akmola	1 427,9	1 513,9	1 818,2	2 060,7	1 454,0
Aktobe	2 361,4	2 135,0	2 464,9	2 657,5	2 244,9
Almaty	1 002,1	1 021,3	1 114,2	1 204,2	944,2
Atyrau	7 553,3	7 171,2	8 653,1	9 446,2	7 850,9
West Kazakhstan	3 170,4	2 699,6	3 179,8	3 547,0	3 083,3
Zhambyl	897,4	918,3	1 062,7	1 183,1	868,0
Karaganda	2 110,6	2 248,9	2 682,6	3 050,3	2 291,8
Kostanay	1 583,1	1 561,7	1 727,0	2 036,8	1 585,3
Kyzylorda	1 848,9	1 534,3	1 701,1	1 825,5	1 553,8
Mangistau	4 049,6	3 443,0	3 880,6	5 025,6	3 554,0
South Kazakhstan	868,9	891,1	975,3	1 071,5	
Pavlodar	2 315,8	2 293,1	2 606,9	3 095,0	2 285,4
North Kazakhstan	1 386,6	1 467,2	1 621,0	1 935,9	1 474,0
Turkestan					559,5
East Kazakhstan	1 636,7	1 656,2	2 006,0	2 232,1	1 677,2
Nur Sultan city	4 821,6	5 574,8	5 273,3	5 608,1	3 802,0

Almaty city	5 021,0	5 439,6	6 138,5	6 505,7	4 133,7
Shymkent city					1 366,9

Source: SC MNE

Indicator 12. Internal and external migration represented by gender

	2014	2015	2016	2017	2018
Internal migration					
The arrival of migrants	405 616	455 451	616 894	930 820	no data
Male	183 793	209 802	285 909	442 230	no data
Female	221 823	245 649	330 985	488 590	no data
The departure of migrants	405616	455451	616894	930820	no data
Male	183793	209802	285909	442230	no data
Female	221823	245649	330985	488590	no data
External migration					
The arrival of migrants	16 784	16 581	13 755	15 595	no data
Male	8 088	8 105	6 427	7 469	no data
Female	8 696	8 476	7 328	8 126	no data
The departure of migrants	28 946	30 047	34 900	37 725	no data
Male	13 151	13 474	15 894	17 301	no data
Female	15 795	16 573	19 006	20 424	no data

Source: SC MNE

Indicator 13. Gross value added by main economic sectors (agriculture, industry, services)

	2014	2015	2016	2017
Agriculture, forestry and fisheries	1 717 786 000 000,0	1 925 870 000 000,0	2 140 007 600 000,0	2 303 001 300 000,0
industry and construction	21419789600000	21408086000000	25197597400000	27695306800000
service industry	6 699 254 900 000,0	7 414 205 000 000,0	8 427 621 100 000,0	9 023 711 000 000,0
other	10 908 590 800 000,0	12 236 762 900 000,0	13 894 256 300 000,0	15 573 041 900 000,0

Source: SC MNE

Indicator 14. The number of students of the Kazakh nationality who are not citizens of the Republic of Kazakhstan, (pers.)

	2013	2014	2015	2016	2017
Total	925	659	568	716	722
Female	437	338	288	334	423
Male	488	321	280	382	299

Source: SC MNE

Indicator 15. The share of TVET students enrolled on the basis of basic secondary education, represented by gender %

	2014	2015	2016	2017	2018
Total	57%	61%	61%	62%	62%
Male	52%	56%	56%	57%	57%
Female	48%	44%	44%	43%	43%

Source: SC MNE

Indicator 16. The share of TVET students enrolled in universities, represented by gender %

	2014	2015	2016	2017	2018
Total	9%	8%	9%	9%	10%
Male	8%	8%	9%	9%	9%
Female	10%	8%	10%	9%	10%

Source: SC MNE

Indicator 17. The share of students enrolled in the dual training represented by territorial affiliation %

Region	The proportion of students enrolled in the dual training	Region	The proportion of students enrolled in the dual training
The Republic of Kazakhstan	19,8	Kostanay	17,1
Akmola	21	Kyzylorda	26,4
Aktobe	20,4	Mangistau	27,2

Atyrau	17,5	Pavlodar	38,1
Almaty	17,5	North Kazakhstan	37,5
East Kazakhstan	11,5	Turkestan	17,9
West Kazakhstan	24,9	Nur Sultan city	15,1
Zhambyl	31,8	Almaty city	6,9
Karaganda	13,2	Shymkent city	11,3

Information about students enrolled in the dual education represented by gender - no data

Source: SC MNE

Indicator 18. Employment by main sectors of the economy (agriculture, industry, services)

	2013	2014	2015	2016	2017
Agriculture, forestry and fisheries	2 073 557	1 605 128	1 362 943	1 385 530	1 318 971
industry and construction	1 699 117	1 768 677	1 773 186	1 766 257	1 704 443
service industry	4 797 974	5 136 269	5 297 184	5 401 589	5 561 739

Source: SC MNE

Indicator 19. The share of young population (age group 15-28 years old) in relation to the total number of economically active population ( at age 16-58 for Women, 16-63 for Men), %

	2014	2015	2016	2017	2018
labor force (age group 15-28 years old)	23%	22%	21%	20%	24%

Source: SC MNE

Indicator 20. The level of economic activity represented by gender (age group 15+), %

	2014	2015	2016	2017	2018
Total	72%	71%	71%	71%	71%
Male	78%	77%	78%	78%	no data
Female	66%	65%	65%	65%	no data

Source: SC MNE

Indicator 21. The level of economic inactivity represented by gender (age group 15+), %

	2014	2015	2016	2017	2018
Total	28%	29%	29%	29%	29%
Male	22%	23%	22%	22%	no data
Female	51%	54%	54%	54%	no data

Source: SC MNE

Indicator 22. The share of economically active population,%

	2014	2015	2016	2017	2018
Total	70,7	69,7	70	69,7	70

Source: SC MNE

Indicator 23. Employment rate by gender (age group 15+), %

	2014	2015	2016	2017	2018
Total	67.1	76.9	77.6	77.7	no data
Male	73.4	80.5	81.3	81.3	no data
Female	61.5	60.3	60.6	60.4	no data

Source: SC MNE

Indicator 24. The level of education among the employed population (age group 15+), %

	2014	2015	2016	2017	2018
higher and incomplete higher secondary, specialized and vocational education	35%	37%	37%	39%	40%
secondary, specialized and vocational secondary, specialized and vocational	33%	33%	35%	37%	42%
basic, secondary, general, primary education	32%	30%	28%	24%	18%

Source SC MNE

Indicator 25. Employment rate by sector (public, private), %. No data.

Indicator 26. Employed population by industry (thousand people)

	2014	2015	2016	2017	2018
Total	8 510	8 433 313	8 553 376	8 585 153	8 709

	074				742
Agriculture, forestry and fisheries	1 605 128	1 362 943	1 385 530	1 318 971	1 226 735
industry and construction	1 768 677	1 773 186	1 766 257	1 704 443	1 740 001
service industry	5 136 269	5 297 184	5 401 589	5 561 739	5 743 006

Source: SC MNE

Indicator 27. The unemployment rate by gender and territorial jurisdiction (age group 15+), %

	2014	2015	2016	2017	2018
Total	5.1	5.2	5.0	5.0	no data
Urban area	5.3	5.2	5.2	5.0	no data
Rural area	4.9	5.3	4.9	5.0	no data
Male	4.3	4.4	4.4	4.4	no data
Female	6.0	6.1	5.7	5.6	no data

Source: SC MNE

Indicator 28. The level of long-term unemployment represented by gender

	2014	2015	2016	2017	2018
The Republic of Kazakhstan	2.4	2.5	2.3	2.2	2.2
Male	1,8	1,8	1,7	1,7	no data
Female	3	3,2	2,8	2,7	

Source: SC MNE

Indicator 29. The unemployment rate according to the population's education level, %

	2014	2015	2016	2017	2018
general secondary education	5,7	6,1	5,0	4,9	4,1
TVET	6,9	7	7,2	7,8	8,1
higher education	0,7	0,7	0,4	0,4	0,4

Source: SC MNE

Indicator 30. The level of youth unemployment (aged 15-28 years) represented by gender and territorial affiliation, %

	2014	2015	2016	2017	2018
The Republic of Kazakhstan	4.2	4.4	4.1	3.9	н/д
Male	3.3	3.7	3.5	3.6	н/д
Female	4.5	4.8	4.2	4.0	н/д
urban area	4.5	4.5	4.1	4.0	н/д
rural area	3.2	3.8	3.5	3.5	н/д

Source: SC MNE

Indicator 31. Informally employed population

	2015	2017
informally employed people in enterprises in the formal sector	943 601	
informally employed people in enterprises in the informal sector	560 867	579 192

Source: SC MNE

Indicator 32. Citizens of the NEET category (age group 15-28) represented by gender and territorial affiliation

	2013	2014	2015	2016	2017
The Republic of Kazakhstan	8,0	8,8	9,5	9,2	8,7
Male	6,6	5,9	5,7	6,1	5,9
Female	9,5	11,7	11,2	12,3	11,5
urban area	8,7	8,2	8,1	8,1	7,9
rural area	7,2	9,4	9	10,7	9,8

Source: SC MNE

Indicator 33. The share of young people (age group 15-28) in relation to the total number of economically active population (age group 16-58 for Women, 16-63 for Men) %

	2014	2015	2016	2017	2018
economically active population	8 961 965,00	8 887 555,00	8 998 843,00	9 027 432,00	9 163 000,00
the total population aged 15 -28 years	2 341 100	2 275 300	2 182 700	2 057 300	2 043 800
the share of young people in relation to the total number of economically active population	26%	26%	24%	23% 23%	22%



Source: SC MNE

Indicator 34. Youth unemployment rate represented by gender, %

	2014	2015	2016	2017	2018
Total	3,8	4,2	3,8	3,8	3,7
Male	3,3	3,7	3,5	3,6	3,3
Female	4,5	4,8	4,2	4	4,1

Source: SC MNE

Indicator 35. The number of registered job seekers, (for 2019)

Region	The number of registered job seekers	Region	The number of registered job seekers
Almaty	<a href="#">6317</a>	Kyzylorda	<a href="#">5253</a>
Akmola	<a href="#">2869</a>	Mangistau	<a href="#">10997</a>
Aktobe	<a href="#">5505</a>	Pavlodar	<a href="#">4378</a>
<a href="#">Atyrau</a>	<a href="#">5362</a>	North Kazakhstan	<a href="#">1820</a>
<a href="#">East Kazakhstan</a>	<a href="#">5036</a>	Turkestan	<a href="#">17691</a>
<a href="#">Zhambyl</a>	<a href="#">5211</a>	Nur Sultan city	<a href="#">5124</a>
<a href="#">West Kazakhstan</a>	<a href="#">4455</a>	Almaty city	<a href="#">4387</a>
Karaganda	<a href="#">5698</a>	Shymkent city	<a href="#">5275</a>
<a href="#">Kostanay</a>	<a href="#">2998</a>	Total:	98376

Source: Electronic labor exchange

Indicator 36. The transition from unemployment to employment (represented by gender). No data.

Indicator 37. The number of job vacancies

2014	2015	2016	2017	2018
26692	22341	21894	22112	26456

Source: SC MNE

Indicator 38. Employment forecast by industry sectors, (thousand people)

	2019	2020	2021	2022
services sector	5624	5687	5741	5792
Agriculture	1181	1133	1089	4050
industry	1136	1138	1139	1140
construction, buildings industry	666	670	674	678

Source: JSC «CDLR»

Indicator 39. Self-employed workers, represented by gender

Region	2013	2014	2015	2016	2017
The Republic of Kazakhstan	2 620 965	2 400 370	2 138 425	2 210 541	2 099 222
Male	1 373 438	1 255 629	1 182 282	1 212 331	1 127 339
Female	1 247 527	1 144 741	956 143	998 210	971 883

Source: SC MNE

Indicator 40. Providing students with places in the dormitories

	Number of TVET educational institutions with dormitories	design capacity	The number of residents	The number of students in need of housing	The percentage of students secured with housing
2014	361	57 175	38 498	16 347	70,0%
2015	no data	no data	44 610	16 320	73,2%
2016	378	66 802	44 617	16729	72,8%
2017	391	78 610	42 424	15 091	73,7%
2018	439	85 818	46 312	17 087	73,0%

Source: MES

Indicator 41. The share of socially vulnerable groups of the population, %. No data.

Indicator 42. The poverty rate

	2013	2014	2015	2016	2017
Total population	16 910 246	17 160 855	17 415 715	17 669 896	17 918 214

The population with incomes below the subsistence level.	47 938	40 141	45 204	45 777	73 318
Depth of poverty	0,4%	0,3%	0,4%	0,4%	0,7%
Acuteness of poverty	0,1%	0,1%	0,1%	0,1%	0,2%

Source: SC MNE

Indicator 43. The number of people with special educational needs studying at TVET.

2013	2014	2015	2016	2017
1004	986	929	1014	1624

Source: SC MNE

Indicator 44. The number of educators trained to work with people with special educational needs.

	2018	2019
Total	242	164

Source: NCJSC "Holding "Kasipkor"

Indicator 45. The number of people enrolled in «The Program for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021»

	The number of persons applying for participation in the program	The number of persons included in program participants	...from the number of participants			...from the number of participants (Total)		
			unemployed	Self-employed	TVET students	program direction (TVET, short-term training courses)	"Business Bastau", loans, guarantee)	Employed participants
2017	595678	572863	403301	149078	20484	92330	23436	317397
2018	673533	628069	508736	119333	no data	29803	9641	101893

Source: MLSP

Indicator 46. The number of students who left the education and training system at an early stage. (by type of ownership of educational organization)

	2014	2015	2016	2017	2018
Total	66932	59702	51879	50586	47750
Public ownership	30534	27390	24177	24515	23246
Private ownership	36 398	32 312	27 702	26 071	24 504

Source: SC MNE

Indicator 47. The number of TVET graduates, represented by gender

	2014	2015	2016	2017	2018
Total	172 538	165 946	149 046	146 562	144 080
Male	88762	84282	76174	76397	76441
Female	83 776	81 664	72 872	70 165	67 639

Source: SC MNE

Indicator 48. The share of TVET graduates who received a diploma with honors, %

	2014	2015	2016	2017	2018
The number of graduates who received a diploma with honors	16 034	15 607	13 679	13 966	13 533
The number of TVET graduates	172538	165946	149046	146562	144080
The share of TVET graduates who received a diploma with honors	9,3%	9,4%	9,2%	9,5%	9,4%

Source: SC MNE

Indicator 49. The share of TVET graduates who have received a skilled-worker grade / qualification by level, %

	2014	2015	2016	2017	2018
The number of TVET graduates who have received a skilled-worker grade.Total	129 945	119 747	108 763	105 892	99 953
The number of TVET graduates	172538	165946	149046	146562	144080
The share of TVET graduates who have received a skilled-worker grade.Total	75,3%	72,2%	73,0%	72,3%	69,4%
The share of TVET graduates who have received a skilled-worker grade higher than was established.	6,3%	7,0%	6,8%	6,7%	7,3%
The share of TVET graduates who have received a	92%	92%	92%	92%	91%

skilled-worker grade, which was established.					
The share of TVET graduates who have received a skilled-worker grade lower than was established.	1,4%	1,2%	1,0%	1,0%	1,4%

Source: SC MNE

Indicator 50. The number of students with disabilities and orphans in TVET

	2014	2015	2016	2017	2018
over 18 years old (Male)	486	408	411	457	414
over 18 years old (Female)	329	315	323	292	322
under 18 years old (Male)	913	1 017	975	1 015	1 208
under 18 years old (Female)	851	724	717	758	776
students – orphans and children deprived of parental care. (Male)	4 446	4 208	4 243	4 014	3 680
students – orphans and children deprived of parental care. (Female)	4 144	3 522	3 358	3 022	2 862

Source: SC MNE

Indicator 51. Employment rate of the TVET graduates, %

	2014	2015	2016	2017	2018
share of employed	58%	57%	59%	61%	61%
share of graduates entering universities	16%	14%	16%	15%	16%
share of graduates entering colleges	1,1%	0,8%	1,0%	1,0%	1,5%

Source: SC MNE

Indicator 52. Employment rate of university graduates, %

	2014	2015	2016	2017	2018
share of employed university graduates	79,6%	75,9%	78,4%	68,9%	н/д

Source: the analytical report of the Bologna process and academic mobility Center

Indicator 53. TVET graduates continuing their studies at universities

	2014	2015	2016	2017	2018
The Republic of Kazakhstan	15 545	13 355	13 715	13 321	13 997

Source: SC MNE

Indicator 54. Information on the number of teachers and masters of industrial training, represented by type of ownership of the TVET organization, by gender and by territorial affiliation

	2014	2015	2016	2017	2018
Total number of teachers	33 361	32 580	32 484	32 961	32 551
public	21 841	21 681	21 629	21 892	21 909
private	11 520	10 899	10 855	11 069	10 642
urban area	29 128	28 427	28 353	28 621	28 168
rural area	4 233	4 153	4 131	4 340	4 383
Male	8544	8385	8427	8710	8601
Female	24 817	24 195	24 057	24 251	23 950
Total number of vocational instructors.	5 634	5 537	5 643	5 978	6 005
public	5 361	5 288	5 387	5 687	5 662
private	273	249	256	291	343
urban area	3 889	3 813	3 896	4 074	4 063
rural area	1 745	1 724	1 747	1 904	1 942
Male	3086	3029	3158	3364	3365
Female	2 548	2 508	2 485	2 614	2 640

Source: SC MNE

Indicator 55. The ratio of students and teachers of TVET organizations, represented by type of ownership and territorial affiliation

	2014	2015	2016	2017	2018
Total	16	15	15	15	15
Public ownership	14	13	13	13	13
Private ownership	20	20	19	19	20
Urban area	16	16	16	15	16
Rural area	12	12	12	12	12

Source: SC MNE

Indicator 56. Teaching staff of TVET organizations represented by categories, %

	2014	2015	2016	2017	2018
highest category	23%	23%	26%	24%	27%

first category	20%	21%	21%	19%	20%
second category	25%	25%	22%	22%	21%
without category	33%	31%	31%	34%	32%

Source: SC MNE

Indicator 57. Teaching staff of TVET organizations represented by gender

	2014	2015	2016	2017	2018
Total number of teachers	33 361	32 580	32 484	32 961	32 551
among them women	24 817	24 195	24 057	24 251	23 950
Total number of vocational instructors	5 634	5 537	5 643	5 978	6 005
among them women	2 548	2 508	2 485	2 614	2 640
Total teaching staff	38 995	38 117	38 127	38 939	38 556
among them women	27 365	26 703	26 542	26 865	26 590

Source:NEDB

Indicator 58. The share of teachers of special disciplines and vocational instructors who completed refresher training courses, %

	2014	2015	2016	2017	2018
The Republic of Kazakhstan	47%	9%	18%	21%	22%

Source:NEDB

Indicator 59. The share of teachers of special disciplines and vocational instructors who completed enterprise-based internships, %

	2014	2015	2016	2017	2018
The Republic of Kazakhstan	4%	2%	0,04%	1,20%	1,40%

Source:NEDB

Indicator 60. Accredited TVET organizations represented by type of ownership

	2014	2015	2016	2017	2018
Public ownership	5	6	13	38	103
Private ownership	4	1	6	18	15
Total	9	7	19	56	118

Source: the analytical report of the Bologna process and academic mobility Center

Indicator 61. Expenditure per student in local currency

	2014	2015	2016	2017	2018
Expenses per student on average in the republic	355,2	316	332,3	381,1	362

Source:NEDB

Indicator 62. Public expenditure on education (as percentage of GDP and percentage of total government expenditure),

	2016	2017	2018
the amount of expenditure on education, billion tenge	1669,4	1843,2	1948,5
the share of education expenditure on the budget	17,70%	15,90%	19,30%
share of education spending in GDP	3,70%	3,47%	3,50%

Source: MF RK, SC MNE RK

## RECOMMENDATIONS BASED ON THE RESULTS OF THE STUDY

The results of the study “the Torino process in Kazakhstan to 2019”, discussing the modern condition of vocational education, the reality and prospects of development of technical and vocational education of the Republic of Kazakhstan, the following recommendations in order to ensure the effectiveness of technical and vocational education and improving the system of training qualified personnel in accordance with the practice of advanced countries, including the countries of the organisation for economic cooperation and development (hereinafter - OECD) and European Union (EU):

**Recommendation 1:** In order to systematize work on vocational guidance for all categories of the population.

**The content of the recommendation:**

It is recommended that MES RK and MLSPP RK, together with the local executive authorities, should work on the creation of a unified system of vocational guidance covering: early vocational guidance for school children, work with applicants who choose educational organizations after 9 and 11 grades, college and university graduates, and adults. In order to ensure the effectiveness of vocational guidance work, it is desirable to develop a single information system that allows for comprehensive vocational guidance testing of school, college and adult graduates, to unite databases of educational organizations, employment centers and the center for the development of human resources to coordinate the activities of structural units involved in vocational guidance work.

**Recommendation 2:** Local executive authorities are recommended to improve the efficiency of formation and distribution of state orders by developing and implementing medium- and long-term monitoring of employment and career path of graduates trained under state orders.

**The content of the recommendation:**

It is recommended that local executive authorities, when forming and distributing state orders, use data from the medium- and long-term forecast developed by the Centre for the Development of Labor Resources to determine the demand for personnel in the regions. To develop on a permanent basis a system for monitoring the employment of graduates and their career path within 5 years after graduation, ensuring a systematic relationship between educational organizations and regional chambers of entrepreneurs and sectoral associations of employers.

Local executive authorities are encouraged to distribute the state order annually depending on the level of employment of graduates using the results of monitoring conducted by MLSPP and MES.

**Recommendation 3:** In order to systematize approaches to the implementation of inclusive education in TVET.

**The content of the recommendation:**

It is recommended that the MES organize a broad public discussion on the implementation of inclusive education in TVET in order to finalize the concept and the phased implementation plan for inclusive education. It is desirable to organize mass special training of teaching staff on the introduction of individual approach to students, taking into account the interests of students with special educational needs.

It is recommended to systematize the work on early identification of children and early remedial pedagogical support for children with disabilities. To create a unified information system with a

database of the results of special needs assessments (medical, educational, social) of persons with special educational needs and, on the basis of these results, to plan State budget programs for the provision of social and medical and pedagogical assistance to these persons. In the teacher training colleges and higher education institutions, include in the curricula of all pedagogical specialties, special subjects that would teach the skills and techniques of working with children with special educational needs. Also, provide for mandatory monitoring and evaluation of the effectiveness of inclusive education based on unified and agreed qualitative and quantitative indicators and procedures.

**Recommendation 4:** The revision and improvement of the mechanisms for assessing the level of professional training and qualification of TVET graduates

**The content of the recommendation:**

NCE "Atameken" together with industry associations, MLSPP and MES, consider the issue and make proposals to improve the tools to motivate employers to participate in the training of specialists and assess the level of professional training of TVET graduates. It is recommended to organize a platform to improve procedures for independent certification and qualification of TIPO graduates.

The functions of the National Council on Qualifications should include coordination of evaluation and qualification centers by sector.

**Recommendation 5:** It is recommended to develop a mechanism for the continuity of levels and contexts of education that will include the assessment and recognition of the results of non-formal learning based on certification and qualification procedures.

**The content of the recommendation:**

NCE "Atameken" together with industry associations, MLSPP and MES accelerate the work within the framework of the Project "Development of labor skills and job stimulation" to develop methodology and procedures for determining, evaluating and recognizing the results of non-formal / informal training with further certification and qualification..

In order to ensure continuity of education levels, the Ministry of education of the Republic of Kazakhstan jointly with the departments of education should to organize the study of the ECVET methodology for colleges.

**Recommendation 6:** Provide for the possibility of introducing a step-by-step transition of colleges to self-management of the educational process.

**Content of the recommendation:**

Colleges in the new competitive environment should be able to independently form their academic policy, which includes such issues as: areas of training in accordance with the needs of the labor market, admission of students, the content of educational programs, the organization of the educational process, the system of ensuring the quality of education and other issues related to the training of popular personnel.

MES together with the Holding "Kasipkor" to develop a mechanism for the transition to the independence of the educational process of colleges, taking into account the positive experience of the College "APEC".