

Appendix 1

to the decree of the President of the Republic
of Uzbekistan No. PD-_____ of 2023

STRATEGY FOR THE DEVELOPMENT OF PROFESSIONAL EDUCATIONN SYSTEM OF THE REPUBLIC OF UZBEKISTAN UNTIL 2030

1-chapter. Introduction.

The professional education system is considered as an important educational network, which produces qualified middle-level personnel for the economic development of any country.

International practice exhibits that professional education plays an important role in not only filling the skills gap in the labor market and but also supporting a career growth, life-long learning, economic development at both a personal and a community level.

We can witness that professional education is becoming more and more popular around the world and is recognized as the driving force of sustainable development, gaining priority in the strategic and operational documents of international organizations such as G20, OECD (Organization for Economic Cooperation and Development) and ILO (International Labor Organization), UNESCO and ASEAN.

To illustrate, the Shanghai Consensus acknowledges a huge potential of professional education in a country's development and highlights the importance of updating and improving this system consistently. This document also emphasizes (a) a need to develop localised strategies as the main factors of promoting professional education at global, regional and national levels, (b) a key role of professional education in meeting the needs of the labor market in the 21st century and (c) its contribution to sustainable and ecologic development, especially to developing "green" jobs.

In Uzbekistan, a number of legal and regulatory documents exist on reforming the professional education system, training personnel in line with the requirements of the labor market, ensuring the quality of education and creating wide opportunities for young people. However, a long-term strategic normative legal document defining the development trajectory of the system until 2030 has not been adopted. The recent reforms in the sector, coupled with a mounting need for qualified workforce in all sectors, have necessitated the creation of the Development Strategy of Professional Education System of the Republic of Uzbekistan until 2030.

This strategy was developed based on UNESCO's Vocational and Technical Education Strategy for 2022-2029 in order to increase the attractiveness of professional education in Uzbekistan, as well as to define the priority areas of development until 2030.

The strategy uses the following key concepts and terms:

Adaptive education - a teaching technology based on building an individual educational trajectory of a student, taking into account his current knowledge, ability, motivation and other characteristics.

Business community - defined as public, non-governmental and private organizations, enterprises and employers that will benefit from graduates of professional education.

Inclusive education - the creation of educational opportunities for all students, regardless of their physical, mental, intellectual, cultural, ethnic, language and other characteristics, to enrol into the educational system on the basis of equality and receive education together with their peers.

Internal evaluation – self-assessment system of professional education providers based on quality assurance criteria;

Competency - a set of knowledge, skills, abilities and personal qualities;

Professional education providers – state and non-state education institutions that deliver professional education services;

Industry 4.0 technologies - a technological process that includes mass introduction of IT into industry, large-scale digitization of business processes and new approaches to production based on the distribution of AI.

External evaluation – assessment of professional education providers by a competent state or non-state quality assurance and accreditation entity;

Teacher's personal development plan – a plan covering the competency-based professional development trajectory of teaching staff that is developed at the beginning of each academic year;

Student's personal development plan – educational trajectory plan developed jointly by the student and a trainer (mentor);

Green skills – a set of professional knowledge and skills based on the principles of green economy, covering the issues of environmental protection, making a society more ecologically clean, energy-efficient and safe;

ECVET - European Credit System for Vocational Education and Training;

EQAVET – European Quality Assurance in Vocational Education and Training;

National Quality Assurance Framework - national quality assurance framework;

Quality Improvement Plan - quality improvement plan developed for professional education providers;

Quality Standards – quality standards developed for qualifications;

STEM (Science, Technology, Engineering and Math) – a set of knowledge and skills (competences) based on science, technology, engineering and mathematics;

VR educational technologies - virtual reality technologies (simulation programs) used for developing professional knowledge and skills.

2-chapter. Current state of the TVET system and existing problems.

Nowadays, about 400,000 students study for 300 professions and specialties in 704 professional education institutions, either full-time or in evening, part-time and dual-education schemes. Of them, 2182,000 students are in vocational schools, 86,000 are in colleges, and 126,000 are in technical schools under the mentorship of approximately 6,770 pedagogues.

Professional education system of Uzbekistan is currently experiencing a number of problems and shortcomings, which are waiting for their solutions, including:

firstly, a lack of digitization of management, planning and organization processes of professional education institutions does not allow quick monitoring of effective implementation of reforms and the decisions;

lack of mechanisms to ensure the participation of stakeholders, including the business community, in the formation of the real need for middle-level personnel prevents the forecasting of current and near future state of the local labor market;

local hokimyats (regional & district administrative units) are making proposals for the parameters of the state order for admission to professional education institutions without analysing the socio-economic development of the regions, needs of the local labor market, and orders of employers, which is tarnishing the attractiveness of professional education;

lack of development of practical relations with employers in TVET system limits the introduction of competency-based education and employment opportunities of graduates;

secondly, in accordance with the current and prospective development trend of Uzbekistan in the field of personnel training, high monthly salaries are now offered to specialists in fields, such as agriculture, engineering, alternative energy, information technology and programming, mechatronics, robotics, construction and transport logistics, in educational institutions. This, in turn, is bearing a need for more pedagogic personnel in these directions to redress shortages of personnel;

lack of state grants and high amount of tuition fee for admission to professional education institutions limit the opportunities for young graduates of secondary schools to receive professional education education;

there are no practice bases for certain professions and specialties where admission parameters are set and students are accepted, and there is a lack of qualified pedagogical personnel and relevant educational literature;

creation of educational methodological support based on professional standards training and an effective mechanism of employer participation in professional education and vocational are not fully developed;

in educational institutions with a small number of students compared to the building capacity, the composition and potential of pedagogic personnel and the lack of cooperation with employers are imposing a negative impact on the quality of education;

thirdly, competence-based education and student-oriented methods are not effectively established in the field of educational process, which, in turn, hinders the development of professional skills and competencies of students;

educational methodical support of pedagogues is not at the required level;

the lack of variety in the provision of educational literature has a negative effect on the quality of their content and methodology;

process of teaching professional foreign language and digital skills needs methodological support;

digital educational content (electronic textbooks, innovative teaching materials, digital didactics, 3D and VR educational technologies) has not been developed in the in professional education system;

electronic platform (online) to share the curriculum and programs with stakeholders and collect their feedback has not been introduced.

fourthly, that the inventory, educational furniture, laboratory equipment and computer equipment in classrooms, educational workshops, sport halls and practice fields of professional educational institutions are outdated is affecting the quality of education;

the system of updating the tools and equipment in the workshops and practice rooms based on the modern requirements and those of employers do not exist;

although a network of new professional education institutions has been established on the basis of vocational colleges, state program for strengthening their material and technical base do not exist.

fifthly, the financing of professional education institutions should be based on an efficient and transparent system;

the main part of the funds allocated to professional education institutions from the state budget is spent mainly on wages and utility payments, and therefore, the renewal of educational equipment and materials, and the refurbishment of educational buildings need more financing;

low wages of professional educational institutions limit the possibilities of retaining qualified teachers and attracting qualified specialists with practical skills to the system.

the amount of the contract payment, which is one of the main financial means of educational institutions, is determined without considering the ability of the population to pay, as a result of which the number of citizens who express their desire to study professional education is decreasing;

a high number of student drop-outs as a result of inability to pay for tuition is posing difficulties in training the experts needed in regions and forming groups in educational institutions.

3-chapter. Main goal and priorities of the strategy.

The main goal of the strategy is to develop a quality professional education system by 2030 that creates wide opportunities in the economic and social spheres.

The strategy consists of the following main directions:

- Modernization of professional education system;
- Quality ensurance in professional education system;
- Diversification of professional education programs;
- Provision of high-quality pedagogical staff in professional education;
- Development of dual education in cooperation with the professional education system and business communities;
- Vocational orientation, promotion of employment through formation of entrepreneurial skills in students;
- Increase of the attractiveness of professional education.

§ 3.1. Modernization of professional education system

3.1.1. Coordination of developing professional education involves

a) establishing a high-level collegial body - the Republican Coordinating Council, which includes experts from various fields – who by using comparative methods will carry out forecasts and analyzes based on the strategic needs of the country and monitoring the improvement of professional education system using a matrix of indicators;

b) developing specific indicators and tools in order to evaluate the result and effectiveness of the future policy of professional education sector based on the established quality and effectiveness standards, goals and advantages.

developing a set of tools and indicators, such as EQAVET, to cover different segments of the population, self-assess and follow-up studies and measure graduate completion and employment rates;

c) nurturing skilled personnel by coordinating the activities of professional education institutions in the systems of various ministries and agencies and taking measures to recognize the qualifications of graduates by employers in the internal and external labor market;

d) developing suggestions as to the recognition of state model documents issued to graduates of professional education institutions in other foreign countries and specific proposals to improve national legislation bases.

Here, the Coordinating Council will have the right to make changes to the structure and duration of educational programs based on the need for rapid training of specialists for the foreign labor market in certain directions.

e) implementing the rating system of professional education institutions and taking measures to reward the managers and pedagogues of highly performing professional educational institutions and thus create a healthy competitive environment;

f) coordinating issues of accreditation of educational institutions, attestation of teaching staff, gradually introducing the certification system of highly skilled teachers and masters of industrial education, and establishing the practice of paying bonuses to teachers with certificates.

g) coordinating the implementation of strategies and targeted programs through donor organizations involved in the development of professional education;

h) establishing a National Forum for forecasting competencies and skills for professional education system.

National Forum covers issues, such as international and national trends, analysis of changing competence and skills needs and their impact on education development, consideration of future competences and skills, and integration of education and training with work activities. Organizing the work of the National Forum can be through cooperation with international organizations in a professional education sector.

3.1.2. Introduction of effective mechanisms for financing professional education sector by/through

a) increasing the state financing of educational expenses step-by-step;

b) introducing a mechanism of rewarding private sectors that direct their financial resources to professional education;

c) introducing the practice of granting tax deductions and loans to enterprises and organizations participating in personnel training in the professional education system;

d) supporting the establishment of public-private partnerships in professional education;

e) reducing social tax on professional education institutions;

f) creating an incentive mechanism aimed at increasing investments in professional education system by shifting from traditional form of resource allocation and operation to the result-based financing model;

g) expanding academic and financial independence of professional education providers in order to meet the pressing needs of the economy;

h) organizing paid education programs and other services in professional education institutions;

i) organizing international recognition and international accreditation of diplomas and qualifications of professional education institutions that are under the

jurisdiction of the ministries and agencies and covering accruing expenses from extra-budgetary funds.

3.1.3. Creating an information system for performing skills analysis and setting promising directions in the future by/through

a) establishing a skills analysis and forecasting process through partners identified by the Coordinating Committee;

b) strengthening institutional capacity to provide information on educational standards, educational programs and teaching methods, use and evaluate monitoring data;

c) ensuring availability of accurate and complete information about social and economic indicators of the processes;

d) establishing ongoing data analysis as a basis for policy development, implementation planning and regulation, and evidence-based decision-making and monitoring;

e) establishing and developing regular information exchange on supporting activities of designated partners and evaluating the effectiveness of donor activities;

f) ensuring publication of conducted analyses and forecast data.

§ 3.2 Quality assurance in professional education system

3.2.1. Develop and implement quality standards by/through

a) creating and implementing National Quality Assurance Framework (NQAF), quality standards (QS) and Quality Improvement Program (QIP) for professional education system;

b) establishing a department at the Institute of Professional Education Development (hereinafter referred to as the Institute) under the Ministry of Higher Education, Science and Innovations of the Republic of Uzbekistan (hereinafter referred to as MHESI)

and employee positions at Republic of Karakalpakstan MHESI, regional and Tashkent departments of MHESI who will be responsible for quality assurance in professional education

and similar position at colleges/technicums within the existing staff number.

c) implementing internal (self-assessment) and external (authorization and accreditation) evaluation mechanisms through continuous and systematic quality assurance cycles, including planning, implementation, evaluation and revision, and thus implementing a performance indicators-based monitoring system;

d) information and data related to professional education are collected through questionnaires and evaluation of training results conducted by the Institute;

- e) studying students' opinions on ensuring the quality of education;
- f) systematically improving professional potential of employees designated as responsible for Quality Assurance;
- g) carrying out external evaluation of training according to established procedure;
- h) ensuring the institute as a focal point for development of international relations for Quality Assurance.

3.2.2. Improving management of professional education through/by

- a) developing information system of "Professional Education Management Processes" to improve management efficiency and digitize management.
- b) organizing selection of management personnel of professional education institutions based on well-organised criteria;
- c) determining and assessing regularly basic competency requirements for leadership positions in professional education institutions;
- d) developing and implementing professional standards of managers and pedagogic personnel of professional education institutions;
- e) determining development plans as a result of internal assessment and analysis of work efficiency of educational organizations;
- f) developing programs on human resources in professional education system and to retain high-potential pedagogic personnel in the system;

Measures will be taken to introduce separate projects with international partners to increase the capacity of employees in the system.

3.2.3. Supporting the creation of an innovative learning environment by/through

- a) the use of digital educational programs in educational process, including distance learning, by deploying innovative methods of teaching and ICT;
- b) necessary measures to promote a symbiosis of professional learning environment and innovation;
- c) the organisation of targeted programs, taking into account the specialization of regions and training directions of professional education institutions;
- d) manuals aimed at developing a personal plan for the development of student competencies in professional education system;
- e) a step-by-step introduction of simulation equipment in the of competency acquisition and evaluation processes;

f) implementation of digital technologies in professional education institutions and trainings in workplace;

g) updating curricula to equip students with digital skills and with the focus on innovative ideas and including requirements for the use of information technologies in the professional standards of pedagogues;

h) improvement of professional education programs by studying innovative developments and experiences of foreign countries in vocational training;

i) developing educational courses and materials to ensure integration of digital technologies into the educational process and to improve IT competences of trainers;

j) creating and implementing step-by-step online modules and programs of distance learning;

k) strengthening material and technical bases of professional education institutions to provide opportunities for students to acquire modern skills;

l) provision of professional education institutions with information communication technologies and high-speed Internet;

m) establishment of exemplary professional education institutions - Centers of Excellence - involving international financial institutions.

§ 3.3. Diversification of TVET programs.

3.3.1. Development of inclusive education by/through

a) equipping educational institutions with adapted devices (elevating devices, ramps, special devices in sanitary rooms, handrails, special desks and chairs and other special protective equipment);

b) providing various privileges and opportunities for vocational training of women in professional education institutions;

c) adopting preventive and corrective measures aimed at students to fully complete their education in the chosen profession or specialty.

3.3.2. Creating programs on sustainable development and “green skills” through/by

a) integrating green skills into educational programs gradually and creating necessary methodological support aimed at teaching these skills;

b) instilling nature-friendly skills in students to contribute to the protection of environment;

c) engaging with the labor market and society to promote knowledge, skills, attitudes and values for the benefit of sustainable development;

d) improving professional education programs to form industry 4.0 technology skills.

e) developing adaptive learning and students' creative/design thinking and digital/ICT skills to implement industry 4.0 technologies.

3.3.3. Implement a student-centered learning approach by/through

a) developing educational plans and programs based on learning outcomes;

b) introducing a system of flexible teaching methods, modularization, recognition of prior learning;

c) establishing a credit module system step-by-step in the professional education sector based on the European Credit System for Vocational Education and Training (ECVET);

d) developing modules based on learning outcomes, digitization and green skills;

e) conducting studies that allow adapting the content of professional to general knowledge and skills;

f) introducing a new method of assessing student learning to support aspiring knowledgeable students;

g) a practice of having graduates' professional skills assessed by employers and impartial experts, as well as taking necessary measures for the recognition of educational documents (diplomas) issued at the end of training in foreign countries;

h) directing the content of educational programs to form necessary skills to use modern technologies;

i) introducing modular professional education programs step by step;

j) developing experimental areas for teaching new educational programs and methods;

k) creating digital educational content of modules and opportunities for students to use them;

l) conducting analysis on the compatibility between teaching methods, study hours, the share of independent and practical work, evaluation methods, relationship between goals of the curriculum and learning outcomes.

§ 3.4. Ensuring high-quality composition of TVET pedagogic staff

3.4.1. Supporting development of innovation and best practices of teaching staff through/by

- a) increasing salaries of pedagogues of professional education institutions gradually;
- b) creating “Professional Guidelines” for pedagogues;
- c) ensuring continuous and systematic professional development of pedagogic personnel at the relevant enterprises;
- d) abolition of the practice of filling out paper reports by introducing a special information system;
- e) enhancing the potential of managers to adapt to and adopt new forms of professional education;
- f) organizing the “Regional Forum of Professional Education Development” to implement new approaches based on foreign experiences;
- g) evaluating regularly the fulfillment of the basic competency requirements of the management staff of professional education institutions and thus introducing a system of result-based rewarding;
- h) developing an online educational platform for continuous professional development of teachers and industrial masters;
- i) reducing red tape on the payment of teachers and industrial masters;
- j) improving the practical skills of pedagogic personnel through a mechanism for organizing internships in production enterprises in relevant fields;
- k) increasing the scope of distance and mixed forms in training of pedagogical staff.

3.4.2. New role of and support to trainers and teachers

Teaching in professional education institutions will be modernised towards competency-based and student-centred learning. To do this, teachers will be supported in following ways:

- a) improving competency of teachers by attaching them to the production enterprise for introducing new technologies and ecological transformation;
- b) planing, organizing, conducting and evaluating on-the-job professional training of teachers to improve the professional level of pedagogic personnel through cooperation;
- c) developing training programs for teachers and practitioners participating in dual education and providing them with free training;

d) developing a program for improving the qualifications of trainers and teachers in order to ensure the continuous and active participation of the private sector in the educational process and examinations;

e) training teachers as career guidance counselors.

§ 3.5. Development of dual education in cooperation with the professional education system and business communities

3.5.1. Development directions of dual education

a) developing dual education development programs based on specialization in each region;

b) reviewing dual education specialties and courses based on suggestions of industry representatives;

c) increasing gradually the number of state grants/scholarship in dual education based on the proposals of the business community;

d) strengthening dual education requirements based on labor legislation;

e) developing the development concept of dual education;

f) introducing STEM-oriented educational programs in dual education;

g) designing guidelines for organization of student evaluations and examinations in dual education;

h) improving methodological support and instructions for the work of mentor-teachers assigned by the enterprise to students in dual education;

i) reviewing legislative documents on issues related to the payment of wages paid to students in dual education;

j) involving a private sector in the training of middle-level personnel extensively and conduct classes directly at the workplace so that students acquire modern professional skills;

k) introducing preferences to enterprises and organizations participating in the training of personnel in dual education.

3.5.2. Strengthening the relationship between professional education system and business community by/through

a) strengthening relations between professional, higher education institutions and employers (business community);

b) creating sufficient number of workplaces for the arrangement of students' practice at workplaces and attach qualified specialists to them as mentors;

c) promoting business communities widely contributing to formation of competencies in students as an example and recognize them as experts in professional education;

d) providing various educational services in addition to the basic educational programs in professional education system, including organization of short-term vocational training courses for business community and organization of marketing and commercial departments in educational institutions at the expense of extra-budgetary funds.

e) supporting creation of products and services by students and helping them establish mutual business partnerships with business community.

f) developing mutual cooperation with business communities in order to use opportunities of industry 4.0 in professional education system.

g) create new jobs for graduates of TVET institutions as a result of the introduction of industry 4.0 technologies.

h) attach professional education institutions to organizations in the relevant areas depending on their specialization.

§ 3.6. Vocational orientation, promoting employment through formation of entrepreneurial skills in students.

3.6.1. Improve career guidance system by/through

a) developing a reliable systems of information and career management based on studying the experiences of the developed countries of the world on career guidance;

b) organizing career guidance centers in professional education institutions in order to effectively guide young people to the profession;

c) developing new technologies and methods that ensure equality among students;

d) developing a plan for the development of personal competence of students;

e) ensuring integration of career guidance platforms with relevant online platforms of professional education;

f) diagnosing general education school students for their professional inclination and organizing excursions to manufacturing enterprises and craft centers;

g) creating an electronic platform for determining the interests and abilities of students.

h) systematizing career guidance procedures;

i) featuring the work carried out on career guidance through mass media;

- j) developing motivational 360° videos and an educational portal that provide complete information on increasing the effectiveness of career;
- k) organizing open days and career fairs in career guidance;
- l) developing and popularizing the model of social cooperation.

3.6.2. Create an electronic information system on the trajectory of graduates of professional education

- a) creating an electronic information system for students of educational institutions, teachers, parents, private sectors about labor market requirements, professional career opportunities, income prospects and employment opportunities of graduates;
- b) encouraging every student to actively and continuously develop their professional skills, find a new job and make a career;
- c) developing a global taxonomy of skills in professional education and guidelines for development, evaluation, recognition mechanism of “green” skills in accordance with the UNESCO program for sustainable development.

§ 3.7. Increase attractiveness of TVET.

3.7.1. Motivate stakeholders in professional education by/through

- a) establishing a system of admission of students to dual education throughout the year based on orders/needs of enterprises and organizations;
- b) developing a professionogram of professions and specialties acquired through professional education;
- c) gradually increasing state grants for training cadres in economically and socially important professions and specialties;
- d) allocating long-term educational loans to contracts payment for students of professional education institutions;
- e) introducing various incentives for professional education graduates to support their future activities in their fields;
- f) comparing local professions and specialties with advanced foreign experience and ensuring their compatibility;
- g) introducing a system of rewarding students based on their learning results;
- h) increasing professions/positions in economic sectors and the labor market where graduates of professional education system can work;
- i) introducing a system of regulated professions and positions (Regulated Occupations) to provide the labor market with qualified personnel.

j) improving the personnel training mechanism suitable for the needs of economic sectors in the region;

k) launching promotional activities on the opportunities and efficiency of professional education for young people to acquire a job in TVET system;

l) allowing the students of professional education system the privileges granted to students of higher education organizations;

m) implementing targeted measures to support the participation of enterprises and organizations in professional education;

n) supporting private sectors that direct their financial resources to professional education.

3.7.2. Promoting flexible learning pathways

a) expanding women's participation in STEM-related fields and ensuring gender equality in professional education programs;

b) introducing a system of providing micro- and digital qualifications by professional education providers;

c) using the material and technical base and scientific potential of relevant higher education organizations to improve the educational opportunities of students;

d) establishing cooperation of professional education institutions with counterpart institutions in foreign countries;

e) establishing a system of mutual recognition of professional education institutions both in home and foreign countries;

3.7.3. Raising awareness of stakeholders in professional education by

a) developing a national qualification brand of professional education;

b) featuring enterprises and organizations participating in the training of professional education personnel through mass media;

c) implementing systematically assessment of graduates of professional education system by enterprises and organizations;

d) organizing discussions on reforms related to professional education among business communities and the general public;

e) promoting the experiences of successful people in professional education through their participation in mass media;

f) organizing visits of partner organizations to the events held in educational institutions and improving information circulation system;

4-chapter. Expected results from the implementation of the strategy.

During the implementation of the strategy, the following results will be achieved:

- a new image of professional education system will be created;
- graduates of professional education will have more opportunities to earn a good income and professional growth;
- costs are optimized as a result of training middle-level personnel through short-term courses organized in the professional education system;
- basic competence requirements for leadership positions in professional education institutions are evaluated;
- a Quality Improvement Program (QIP) will be introduced for professional education providers;
- business community and social partners are involved in quality assurance in professional education;
- the system of accreditation of professional education institutions will be established by the responsible body;
- Based on EQAVET indicators, a quality assurance system will be introduced in professional education.
- Based on ECVET, a gradual credit module system will be introduced in professional education;
- infrastructures of professional education institutions for the development of inclusive education will be improved;
- a new model of stakeholder engagement will be developed;
- The Chamber of Commerce and Industry of Uzbekistan will be given additional authority to ensure participation in professional education;
- new qualifications for the development of dual education and trainer-apprentice system will be introduced;
- a mechanism to encourage private sectors that direct their financial resources to professional education will be introduced;
- professional training programs will be developed based on the suggestions of employers;
- activities of the National Forum on skills forecasting for professional education system will be launched;
- existing career guidance platforms will be integrated into relevant online platforms of professional education;
- an electronic information system will be introduced on the future trajectory of graduates.