

**ОБРАЗОВАНИЕ И ОБУЧЕНИЕ: МЕТОДОЛОГИЯ, ТЕОРИЯ, ТЕХНОЛОГИЯ**  
**БІЛІМ БЕРУ ЖӘНЕ ОҚЫТУ: ӘДІСТЕМЕ, ТЕОРИЯ, ТЕХНОЛОГИЯ**  
**EDUCATION AND TRAINING: METHODOLOGY, THEORY, TECHNOLOGY**

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**PUBLIC-PRIVATE PARTNERSHIP IN THE FIELD  
OF VOCATIONAL EDUCATION**

**Abstract**

The article considers the possibility of the development of public-private partnership in the field of vocational education and substantiates its necessity for high-quality training and further employment of specialists in accordance with the requirements of the modern labor market. The aim of the study is to identify new trends in the training of competitive graduates of technical and vocational education (VET) and higher education institutions (HEI) in the conditions of modern economy using public-private partnership (PPP) mechanisms. The research methodology includes general scientific and theoretical research methods. Methods of tabular representation of data is used as statistical tool. Originality of the research is that it is relevant and necessary to develop new model of training young specialists, involving the implementation of educational, research, innovative and entrepreneurial, spiritual and moral activities that meet modern trends. The authors carried out the analysis of the level and quality of training of national personnel in terms of ensuring the future needs of the labor market of the Republic of Kazakhstan and identified the advantages of using public-private partnership mechanisms in improving the skills, employment, retraining of future specialists. The paper was prepared within the grant project of the Ministry of Education and Science of the Republic of Kazakhstan AP08957434 “Development of a system of evaluation and certification of professional competences of experts of PPP in Kazakhstan in accordance with international standards and advanced technologies”.

**Key words:** partnership, labor market, training, social responsibility, vocational education, university, employment of graduates.

**Introduction**

The new system of relations, public-private partnership, is becoming more relevant in the conditions of market relations. Public-private partnership is a system of relations between professional educational organizations, employers, state and local authorities, public organizations, small and

medium-sized businesses, employment services, based on mutually beneficial cooperation and aimed at realizing the interests of all participants in this process [1].

Through public-private partnerships at the High Educational Institutions, it is possible to get new opportunities: simplified access to information on the labor market, provided requirements of the employers for training of specialists, simplified procedure for the approval of training programs that meet the requirements of employers, wider opportunities for students' practices, increasing their employability and possibilities for the organization of short-term training for teachers. [2].

It is clear that the current challenges of the last technological transformation and other vital factors have an impact on the development of the labor market system, the training of qualified and competitive specialists with demanded skills, and the use of public-private partnership (PPP) mechanisms in this direction is becoming more relevant than ever.[3]

The aim of the study is to identify the modern trends in the training of in-demand specialist of technical and vocational education (TVE) and higher education institutions (HEI) in the conditions of modern challenges in economy using public-private partnership (PPP) mechanisms.

There is carried out the analysis of the level and quality of training of national personnel in terms of ensuring the needs of the labor market of the Republic of Kazakhstan for the nearest future and identified the advantages of using public-private partnership mechanisms in improving the skills, employment, retraining of future specialists.

### **Literature review**

A characteristic feature of the modern mixed economy is the partnership of the state and the private sector in recent decades, explained by the term “public-private partnership” (PPP) – a special form of interaction between business and government in order to implement socially significant programs in various fields of activity [4]. According to V. L. Yeryomin, Public-private partnership in the field of education can be represented as the interaction of state educational institutions and business structures on the basis of mutual interests to achieve common goals. We can also say that this partnership is an alliance between the state and business in order to implement educational projects based on legislative acts and special agreements” [5]. It represents a special type of interaction between educational institutions and market institutions, state and local authorities, public organizations, various ministries and departments, with enterprises of various forms of ownership- with customers of personnel services, aimed at coordinating and implementing the interests of participants in professional training.

The development of PPP is both a trend and, at the same time, a chance to achieve, if not “advanced” education, then at least adequate education. We consider social partnership as a factor of ensuring the quality of vocational education and, as a result, a factor that ensures the employment of graduates.

There is an obvious need to develop partnership systems focused on long-term and strategic cooperation. This will allow us to coordinate the personnel order for specialists of a particular skill level, to take into account the changing qualification requirements of employers as the main customers of personnel to the quality of professional training in the regional network of vocational training institutions. In other words, public-private partnership makes it possible to increase the efficiency of personnel training considering the requirements of the regional labor market

### **Methodology**

The research consists of the methodology of comparisons, generalizations and systematic analysis with using the data of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan, International Rating Agencies, the United Nations, etc., including:

- ◆ system-structural approach – studying changes in the professional and qualification structure of personnel training;
- ◆ integrative-developmental approach – studying the professional training of practice-oriented personnel;
- ◆ synergetic approach-justifying directions for improving the level of training and retraining of personnel, taking into account all factors and conditions;
- ◆ competence-based approach – determining the role of professional competence in the training of qualified specialists.

When analyzing the level and quality of employees' training in the conditions of ensuring the future needs of the labor market, the following methods are used: factorial, functional analysis and graphical methods.

### Results and discussion

It is apparent that the main factor of human capital development and the main measurement of the global competitiveness of the economy is the high proportion of Knowledge workers engaged in cognitive non-routine work. Kazakhstan is not in the top development trajectory list of countries' ranking. In this regard, the formation of a single professional and educational space with the system of the public-private partnership becomes necessary to improve the quality of human capital and the competitiveness of national personnel.

As for Kazakhstani state on this issue, there are all the main levels of training presented in accordance with the International Standard Classification of Education (ISCED) (Table 1).

Table 1 – Graduation of students by level of education

Код	Name of the training level	2010		2015		2019	
		people	%	People	%	people	%
ISCED 2	Number of graduates of the main secondary school (9 classes)	281988	35,6	224674	32,8	235404	34,9
ISCED 3	Number of graduates of the general secondary school (11 classes)	151448	19,1	129406	18,9	143089	21,2
ISCED 3 ISCED 4	Graduates of TPPSE organizations (technical and professional, post-secondary education)	190469	24,0	165946	24,3	144080	21,4
ISCED 6	Graduates of higher educational institutions	161964	20,4	147184	21,5	130691	19,4
ISCED 7	Graduates of Master programs	6 843	0,9	15816	2,3	19233	2,9
ISCED 7	Graduation of residency trainees		0,0	603	0,1	1300	0,2
ISCED 8	Graduation of doctoral students	207	0,0	533	0,1	721	0,1
	Total	792919	100,0	684162	100,0	674518	100,0
Note – Source [6].							

From 2010 to 2019, the number of graduates at all levels of education decreased by 118.0 thousand people (among the main reasons we can note the decline in the birth rate in the second half of the 90s). The largest group of graduates in the organizations of the category of post – secondary education is the graduates of the TPPSE. The share of graduates of postgraduate education (undergraduates, residency and doctoral students) has increased and is about 3.2%. In other groups, there was a decrease in graduation, including the number of university graduates decreased by almost 30.0 thousand people.

Based on the study, the trend of slowing the growth of higher education coverage is associated with the high cost of education, the quality of education (the possibility of obtaining paid education abroad), insufficient efforts to develop higher education, the possibility of obtaining free vocational education within the framework of the TPPSE development program, etc.

Admission and training of personnel in Kazakhstan was carried out mainly through the educational services from the funds of the population and enterprises (70% of university students' study at the expense of their own funds and the funds of enterprises (1.2%) [6]. According to the data, enterprises have a passive influence on the structure of national personnel training.

Thus, 50% of university students in Kazakhstan are trained in the specialties 5B010000 – “Education” (28%) and 5B070000 – “Technical sciences and technologies” (22%). As for the technical sciences, 50% of students are trained in 7 specialties: – 5B070200 – “Automation and Control”; – 5B070300 – “Information Systems”; – 5B070400 – “Computer Engineering and Software”; –

5B070800 – “Oil and Gas Business”; – 5B071800 – “Electric Power Engineering”; – 5B071900 – “Radio Engineering, Electronics and Telecommunications”; – 5B072900 – “Construction”.

From the side of population (mainly due to the purchase of educational services), the least popular technical specialties are: – 5B070500 – “Mathematical and computer modeling”; – 5B071000 – “Materials Science and technology of new materials”; – 5B071500 – “Marine Engineering and Technology”; – 5B072200 – “Polygraphs”; – 5B072300 – “Technical Physics”; – 5B072500 – “Technology of woodworking and wood products”; – 5B073300 – “Technology and design of textile materials”; – 5B073800 – “Technology of materials processing”; – 5B074600 – “Space engineering and technologies”; – 5B075300 – “Chemical technology of refractory non-metallic and silicate materials”. Only 3% of students study in these specialties, including 366 people at the expense of the population and enterprises.

Vocational training of students of TPPSE is carried out in 15 enlarged groups of specialties, including 186 specialties under the state educational order and 161 specialties on a paid basis. 45% of TPPSE students are trained in three specialties: 0100000 – “Education”; 0300000 – “Medicine” and “Pharmacy”; 0500000 – “Service, Economics and Management” [7]. TPPSE specialists are trained mainly for the service economy – education, management, finance, accounting, and services.

There are 265.2 thousand people are trained on the state order basis, and 224.1 thousand people are trained on a paid basis. The first priority group of training specialists under the state order (the largest number) is formed in such specialties as: – 1200000 – “Production, installation, operation and repair (by industry), Transport Operation” (44.2 thousand people); – 0500000 – “Service, economics and Management” (33.2 thousand people); – 0100000 – “Education” (30.2 thousand people).

The second priority group of training specialists, for which 34% of the state order is allocated, is carried out in the following specialties: – 1500000- “Agriculture, veterinary medicine and ecology”; – 1300000 – “Communications, telecommunications and information technologies. Electronic equipment”; – 1100000 – “Transport”; – 1400000 – “Construction and public utilities”.

A small share is occupied by specialties related to mechanical engineering, maintenance, and the mining industry.

Improving the system of technical and vocational education, timely provision of the country’s economy with the necessary technical specialists and working professions should become a purposeful educational policy of Kazakhstan, including the introduction of public-private partnership to the expansion of dual training, the organization of training centers that are in demand in the labor market, on the basis of colleges with a guarantee of subsequent employment of graduates, the development of professional standards and legislative regulation of the process of professional qualifications.

The practice of professional development in Kazakhstan is based on the following scheme (Figure 1. 253 p.), according to which the specialists of the OECD Program for Improving the Competitiveness of Eurasian Countries, when updating professional standards, it is recommended:

- ◆ improvement of the institutional structure that contributes to the improvement of the level of qualifications, the qualitative updating of professional standards, the effectiveness of the system of vocational education and training;
- ◆ development of educational programs, assessment and certification systems based on the introduction of professional standards, formation of a base for the creation of training programs and assessment of qualifications;
  - ◆ development of assessment and certification tools using professional standards;
  - ◆ conducting trainings and seminars on an ongoing basis on the formation of the concept of professional standards, the study of methodology and functions;
- ◆ improvement of the examination procedure in the field of development and implementation of professional standards;
  - ◆ development of the PPP mechanism in the implementation of professional standards;
  - ◆ use of the forecast of labor market development in the creation of professional standards;
  - ◆ the accreditation of training programs and the establishment of an institutional framework for the implementation of professional standards during the preparation of the panel of national experts;
- ◆ develop a system for monitoring and controlling compliance and ensuring consistency between professional standards, training programs and evaluation procedures.

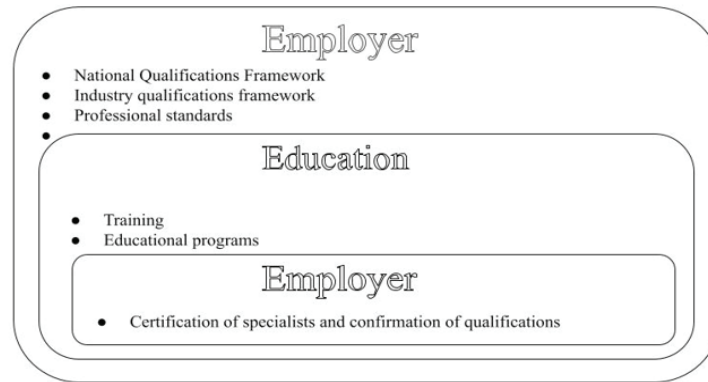


Figure 1 – Professional development of specialists

“The national qualifications framework” consists of three parts:

The first one includes the employer’s requirements for the applicant’s knowledge and skills, or “professional standards”.

The second one includes educational standards and programs adapted to professional standards (training of specialists in accordance with the requirements of business and economics).

The third part is on an independent assessment of education or certification. According to the experience of developed countries, after receiving a diploma, a specialist is sent to independent centers to confirm their qualifications and obtain a corresponding certificate. Such a system is being implemented in Kazakhstan.

According to the Labor Code of the Republic of Kazakhstan, since January 1, 2016, the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” approves professional standards developed by industry associations of employers (Figure 2).

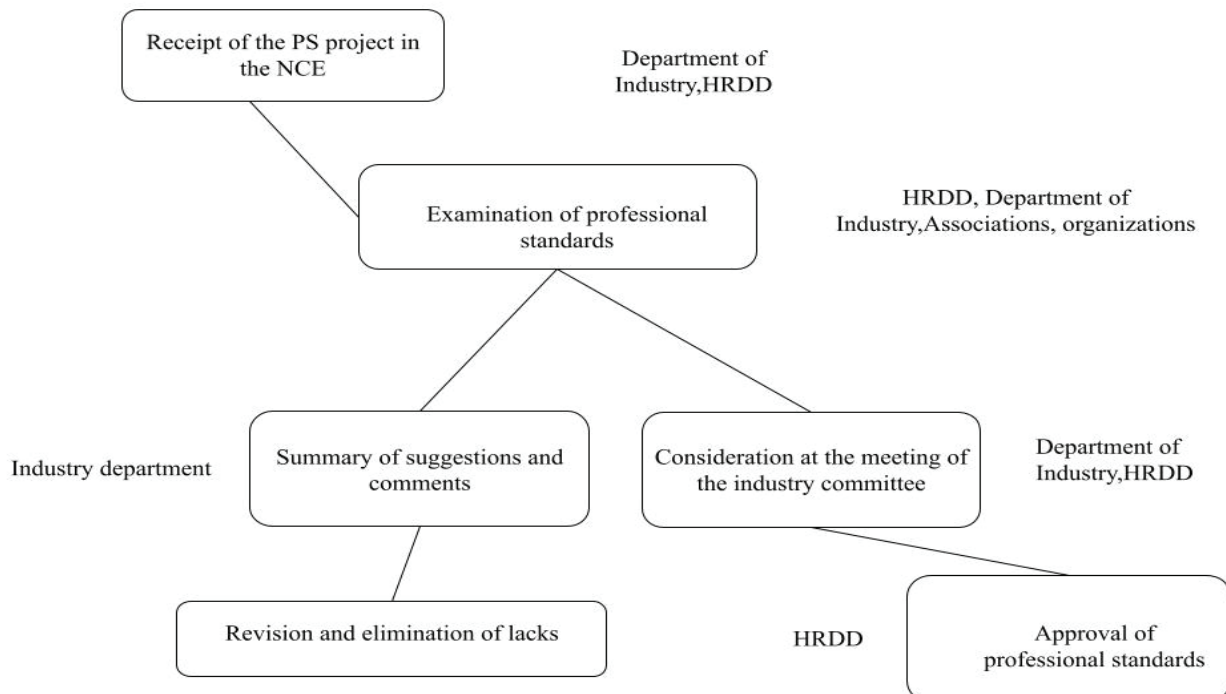


Figure 2 – The procedure for approving professional standards in the NCE “Atameken”

Work on the development of the National Qualification System of the Republic of Kazakhstan has been continuing since 2016 within the framework of the Partnership Agreement between the Government and the International Bank for Reconstruction and Development within the framework of the project “Development of labor skills and job promotion”, the implementation period of which is 5 years (2016–2020). There is planned to develop about 550 professional standards within the framework of sub-component 1.1. “Improvement of professional standards, including revision and harmonization processes”.

Professional standards can be developed at the initiative of employers’ associations by joint groups of experts from industrial enterprises, educational institutions and scientific institutions [8].

In addition to that, the developed professional standards can also be considered in the context of sectoral state bodies.

Thus, the Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan is the leader in the sectoral framework of qualifications, while the Ministry of National Economy of the Republic of Kazakhstan (supervised by the Ministry of the PPP Center ) and the Ministry of Education and Science of the Republic of Kazakhstan do not have professional standards, while having the sectoral framework of qualifications. Taking into account that the Ministry of National Economy of the Republic of Kazakhstan is the sole shareholder of JSC “Kazakhstan Center for Public-Private Partnership” (hereinafter – the Center for PPP Development), established by the Decree of the Government of the Republic of Kazakhstan dated July 17, 2008 No. 693 “On the creation of a specialized organization for concession issues” to provide services for research, training, consulting, expertise and evaluation of the implementation of investment projects, including PPP projects, we consider it appropriate to introduce professional standards and regulatory documents in the field of certification of PPP specialists and accreditation of legal entities in the field of PPP.

Nowadays, more than 1,300 different PPP projects totaling more than 3 trillion tenge are at the planning and implementation stages throughout Kazakhstan, requiring expert and analytical support and a team of professionals [9].

The labor market needs for qualified specialists in the field of PPP are constantly growing in the current economic situation and external challenges. In particular, the development of its scientific component: conducting scientific research, improving the skills of specialists and the level of teaching PPP disciplines.

The Center for PPP Development and the L. N. Gumilyov Eurasian National University have developed an innovative educational program of scientific and pedagogical direction for the preparation of masters of Economic Sciences in the specialty “7M04106-Economics of public-private partnership” with a two-year training period. In 2020, the first enrollment for the program was made in the number of 6 undergraduates.

The peculiarity of the educational program is the optimal ratio in the educational process of theoretical and practical training, a personality-oriented approach to the educational process and in the preparation of masters with in-depth knowledge in the field of national economy, PPP, state regulation and business, competitiveness in the labor market, which is adapted to various areas of analytical, expert and managerial activities [10].

The objects of professional activity of the graduate are: economic, financial, marketing, production and economic, planning and economic and analytical services of organizations and enterprises, regardless of their type of activity and form of ownership and the levels of state bodies, republican and local ones.

The PPP Center recommended a number of disciplines for including into the educational program as the main ones, such as: “Theoretical and methodological aspects of PPP”, “The legal framework of PPP in the Republic of Kazakhstan”, “Forms of PPP”, “Financial and economic model of the PPP project”, “Specifics of the PPP contract”, “Assessment and expertise of the implementation of PPP projects”, “Risks in PPP projects”, “Project Management”, etc.

The developed joint educational program has no analogues in higher educational institutions of Kazakhstan.

## Conclusion

Thus, in order to train competitive young specialists that meet the long-term needs of a balanced labor market in the context of modern transformation of the economy, it is necessary to:

- ◆ create conditions for improving the quality of human capital by training future employees with high-quality and in-demand skills and competencies;
- ◆ reduce the disproportions in the demand of the new economy for personnel, create conditions for retraining and advanced training of employees;
- ◆ development of a national system for forecasting the needs of the new economy in professional personnel and improvement of the national system of qualifications;
- ◆ modernization of the education system, in particular: development of educational programs according to international standards and requirements of the new economy;
- ◆ improving the quality of training and motivation of teaching staff; partnership between the state and private business, aimed at training qualified personnel with technological and digital competencies;
- ◆ improving the mechanisms of interaction between students and potential employers, creating favorable conditions for the development of high-tech companies and start-ups for the training of qualified personnel in demand by the digital industry market;
- ◆ creating conditions for large-scale training of highly qualified specialists in the field of PPP and involving domestic higher educational institutions in the training process together with the Kazakhstan PPP Center;
- ◆ implementing educational programs will make up for the lack of qualified specialists in the field of PPP, and in the future will contribute to the development of PPP and increase of the number of high-quality PPP projects in Kazakhstan, which will undoubtedly have a positive effect on the socio-economic development of the country.

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## **КӘСІПТІК БІЛІМ БЕРУ САЛАСЫНДАҒЫ МЕМЛЕКЕТТІК-ЖЕКЕМЕНШІК СЕРІКТЕСТІК**

### **Андатпа**

Мақалада кәсіптік білім беру саласында мемлекеттік-жекеменшік серіктестікті дамыту мүмкіндігі талқыланады және оның мамандарды жоғары сапалы даярлау және еңбек нарығының сұранысына сәйкес одан әрі жұмысқа орналастыру қажеттілігі негізделеді. Зерттеудің мақсаты – мемлекеттік-жекеменшік серіктестіктің (МЖС) тетіктерін қолдана отырып, қазіргі заманғы экономика жағдайында техникалық және кәсіптік білімнің (ТжКБ), жоғары оқу орындарының (ЖОО) бәсекеге қабілетті түлектерін даярлаудағы жаңа үрдістерді айқындау. Зерттеу әдіснамасы жалпы ғылыми және теориялық зерттеу әдістерін қамтиды. Статистикалық құрал ретінде мәліметтерді кестелік ұсыну әдістері қолданылды. Зерттеудің бірегейлігі – қазіргі заманғы үрдістерге сәйкес келетін білім беру, ғылыми-зерттеу, инновациялық-кәсіпкерлік, рухани-адамгершілік қызметті жүзеге асыруды көздейтін жас мамандарды даярлаудың жаңа моделін әзірлеу қажеттілігінде. Авторлар Республиканың еңбек нарығының болашақ қажеттіліктерін қамтамасыз ету тұрғысынан ұлттық кадрларды даярлау деңгейі мен сапасына талдау жүргізді. Қазақстанда МЖС тетіктерінің артықшылықтары олардың біліктілігін арттыру, жұмысқа орналастыру және қайта оқытуда екені анықталды. Мақала Қазақстан Республикасы Білім және ғылым министрлігінің «Халықаралық стандарттар мен озық технологияларға сәйкес Қазақстандағы МЖС сарапшыларының кәсіби құзыреттерін бағалау және сертификаттау жүйесін әзірлеу» АП08957434 гранттық жобасы шеңберінде әзірленді.

**Тірек сөздер:** серіктестік, еңбек нарығы, оқыту, әлеуметтік жауапкершілік, кәсіптік білім, жоо, түлектерді жұмысқа орналастыру.

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## **ГОСУДАРСТВЕННО-ЧАСТНОЕ ПАРТНЕРСТВО В СФЕРЕ ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ**

### **Аннотация**

В статье рассматривается возможность развития государственно-частного партнерства в сфере профессионального образования и обосновывается его необходимость для качественной подготовки и дальнейшего трудоустройства специалистов в соответствии с запросами современного рынка труда. Целью исследования



является определение новых тенденций в подготовке конкурентоспособных выпускников технического и профессионального образования (ТиПО), высших учебных заведений (вуз) в условиях современной экономики с применением механизмов государственно-частного партнерства (ГЧП). Методология исследования включает общенаучные и теоретические методы исследования. В качестве статистического инструмента используются методы табличного представления данных. Оригинальность исследования заключается в необходимости разработки новой модели подготовки молодых специалистов, предполагающей осуществление образовательной, научно-исследовательской, инновационно-предпринимательской, духовно-нравственной деятельности, отвечающей современным тенденциям. Авторами проведен анализ уровня и качества подготовки национальных кадров с точки зрения обеспечения будущих потребностей рынка труда Республики Казахстан и выделены преимущества механизмов ГЧП в повышении их квалификации, трудоустройстве, переобучении. Статья подготовлена в рамках грантового проекта Министерства образования и науки Республики Казахстан АП08957434 «Разработка системы оценки и сертификации профессиональных компетенций экспертов ГЧП в Казахстане в соответствии с международными стандартами и передовыми технологиями».

**Ключевые слова:** партнерство, рынок труда, обучение, социальная ответственность, профессиональное образование, вуз, трудоустройство выпускников.