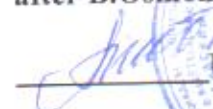


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Methodology for analysis of demand and supply in the labor market

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Introduction

Educational institutions of vocational education and training (hereinafter referred to as VET) play an important role in the development of human capital - a factor in economic growth, social integration and sustainable development of the country. In order to respond in a timely manner to the socio-economic needs of the country and the region, educational institutions study and analyze information on the labor market. In the context of a rapidly changing labor market with the introduction of new technologies and products, the emergence of new professions and new skills (competence) requirements, collecting information on current and future skills needs

can help JASU better align learning and occupation (work), which is of paramount importance for the development of the country.

The tripartite representation of the member states of the International Labor Organization (hereinafter referred to as the ILO) agreed that countries that have succeeded in linking skills and increasing productivity, employment and development are aimed at skills development policies towards three main goals:

- matching the offer with the current skill needs;
- helping workers and businesses adjust to change;
- formation and maintenance of competencies for the future needs of the labor market.

In order to achieve these goals, JASU needs to understand the local, regional and national economy, including trends in industries, in the world of professions, in the field of employment. The study and analysis of the needs of the local / regional labor market, which remained unsatisfied, is also valuable for shaping the content of education and training of educational institutions.

It is important for to know how well they have prepared graduates for their JASU professions/specialties. Both students and leaders of educational institutions know that there are large differences in incomes in the labor market for holders of diplomas (qualifications). Institutions need more and more reliable information about their graduates' professional lives after graduation in order to understand how well their educational programs help graduates develop professionally and achieve economic self-sufficiency. Therefore, conducting alumni tracking research is relevant for educational institutions.

The university, participating in the formation and development of the country's human capital, thus plays a vital role in developing the knowledge and skills of young people and adults, helping them to become socially and economically active individuals.

JASU also needs to evaluate its services to businesses and other organizations against the expected learning outcomes, and it is important for them to be aware of partner satisfaction with the results achieved. For curriculum design and revision, the use of such labor market information can enhance opportunities and help the institution to position itself as a reliable and experienced provider offering in-demand knowledge and skills.

In order for educational institutions to fulfill their role in developing and developing the necessary and relevant skills, they should ensure that the learning outcomes correspond to the needs of the labor market in such a way that employers can be sure that they are hiring competent employees who have the necessary qualifications (competences). In this case, employers will also be able to rely on the educational experience of the institution to “upskill” the existing workforce in order to remain competitive.

JASU that have regional, national or global coverage and will serve more than one labor market should also use information about the needs and trends of external markets (eg EAEU market, EU, etc.).

Thus, educational institutions need to assess the fit between their vocational training programs and labor market trends, evaluate the cost-effectiveness of their educational services and make the necessary improvements.

To date, there are many approaches and tools for studying and analyzing the labor market. So, for example, the body responsible for determining the need for personnel for the future is the Ministry of Labor and Social Development of the Kyrgyz Republic (hereinafter - KR) together with the Ministry of Economy of the KR. The Ministry of Labor and Social Development of the Kyrgyz Republic applies the labor market research methodology. The purpose of the Methodology for forecasting the need for labor resources is the formation of a comprehensive mechanism for forecasting the needs of the labor market for the training of qualified personnel.

Also, within the framework of the Project “Application of the G20 Training Strategy: Partnership between the ILO and the Russian Federation” (2nd phase), with the support of the Ministry of Education and Science of the Kyrgyz Republic, a methodology for analyzing the

demand for skilled labor and its application for developing recommendations for systems professional education in the Kyrgyz Republic.

In accordance with the recommendations of the ILO Project, based on the results of the pilot, the Ministry of Labor and Social Development of the Kyrgyz Republic is the leading and coordinating agency for analyzing the demand for skilled labor and developing recommendations for vocational education systems. The Ministry of Education and Science of the Kyrgyz Republic and ANPO under the Ministry of Education and Science of the Kyrgyz Republic are recommended to take measures to introduce a system for collecting information on the number and labor status of graduates of professional lyceums, colleges and universities in the year of graduation by profession and transfer this information to the Ministry of Labor and Social Development of the Kyrgyz Republic in the year of analysis in accordance with the requirements of the above Methodology. A review of the methodologies used in the Kyrgyz Republic showed that conducting labor market analysis requires a lot of resources and it is obvious that JASU is not able to conduct large-scale studies due to their limited human and financial capabilities.

At the same time, JASU must demonstrate awareness of near and future trends in demand for skills so that they can develop their services. To this end, the educational institution needs to find answers to the following questions:

- What information about the labor market should be studied and analyzed by the educational institution?
- What labor market information is currently used (available) and from what sources?
- What information about the labor market will be needed in the future so that the educational institution can provide services in line with the needs of the labor market?
- Who should be responsible in educational institutions for identifying the need for qualifications and skills?

Accordingly, the purpose of this methodology is to apply a set of methods for collecting and interpreting statistical and other information on the labor market, allowing the HAPA to:

- a) evaluate the dynamics of supply and demand for qualified personnel in the regional labor market,
- b) develop recommendations for the development, revision of programs and planning for the recruitment and graduation of personnel for the relevant qualifications.

Thus, the Methodology for the analysis of supply and demand in the regional labor market is aimed at assisting JASU in collecting and analyzing information about the needs of the local / regional labor market, in order to improve the compliance of the educational services provided with demand.

Educational institutions are recommended three main methods for surveying and assessing supply and demand in the local labor market:

1. Review and analysis of sources of information about the needs for personnel in the labor market in the country as a whole and by region: government agencies, business associations, Internet resources, the media, etc.;
2. Tracking the employment of graduates (the employment rate shows the relevance and demand for specialties at the current moment);
3. Analysis of information about the needs in the labor force based on a direct survey of employers in the region.

This Guide to Using the Supply and Demand Analysis Methodology consists of an Introduction, 4 parts and appendices.

The introduction gives a brief justification for the importance of analyzing the supply and demand of the regional labor market of JASU in order to increase the correspondence of educational services to demand in the regional labor market.

Part I informs about the basic concepts of the labor market, suggests the role and functions of employees and partners of educational institutions for conducting an analysis of supply and demand in the regional labor market.

Part II describes the sources of information on labor market needs in the country as a whole and by region.

Part III provides guidance on conducting a graduate tracking study to identify the gap between the knowledge and skills provided by university and the real needs of the labor market.

Part IV updates the technology of conducting a direct survey of employers in the region to collect primary information about the needs of employers in the local/regional labor market.

The methodology for analyzing supply and demand in the regional labor market can be used by the administration, teachers, expert groups and university partners to develop and revise the vision, mission, strategic plan and educational goals of JASU educational institutions. When developing and updating educational programs, the Methodology will help to substantiate the need for training specialists of certain qualifications or new skills/competences (associated with new activities/functions) with factual data on existing and future trends and requirements of the local/regional labor market.

.I. Demand and supply in the labor market

Any labor market includes an interaction between the demand for personnel and their supply, regardless of the sources of this demand and supply dynamics, which may include active migration and other labor flows. A significant proportion of jobs, as well as a significant proportion of the labor force, can be low-skilled and unskilled, which in a certain way limits the role of vocational education in the preparation of qualified personnel.

The systems of primary and secondary vocational education use relatively short cycles of vocational training (compared to universities) and therefore the periods of their operational planning for the recruitment and graduation of personnel do not exceed 1-3 years. That is why these systems require knowledge of the short-term current and predicted situation in the labor market, which may develop differently for each of the mass professions and in each of the regions of the country.

Traditionally, JASU plan educational services based on the annual data of students enrolled in certain specialties, justified by the personal interests of students, and also taking into account the demand for certain qualifications in the labor market. Information about the demand for skilled workers Educational institutions gain strength or a new skill (competence) through interaction with employers during the period of work experience, during final exams, participation in job fairs, as well as within the framework of various thematic round tables and meetings with employers. Of course, personal contacts of representatives of educational institutions with employers also provide them with some information about the needs of the labor market.

However, in order to plan and implement better educational services in accordance with the real and current needs of the labor market and to make informed decisions for educational institutions regarding proposals (development of a new program, admission planning, financing, etc.), it is necessary to carry out systematic work to study the demand and offers in the regional labor market.

Young people and adults also need access to comprehensive and impartial information, guidance and advice on training and employment opportunities and their relevance to labor market needs. Young people and adults should be aware of the ever-increasing demands of employers in terms of skills and that they will have to adjust and retrain for new jobs (new functions) throughout their careers. Labor market information is an important tool in developing this understanding.

To do this, ZHAGU, interested parties - users of information on supply and demand in the labor market need to know about basic concepts such as the labor market, supply and demand in the labor market, factors affecting supply and demand. A better understanding of them will allow them to make the right decisions about learning and work, which is especially important for lifelong learning.

The labor market is the mechanism that connects potential employers (labor demand) with people who can work (labor supply). Labor markets operate at the local, regional, national and international level, reflecting the functioning of the economy.

Demand in the labor market is the total demand for a country's labor resources at any price for them.

Supply in the labor market is the total supply of labor resources of workers in the country at all possible labor prices.

The main indicator of the labor market is wages, which is determined, among other things, on the basis of the total cost of goods necessary to ensure normal human life.

Demand factors in the labor market

Demand in the labor market is formed under the influence of the following factors:

1. structures of social production;
2. the level of development and scale of the structure of social production;
3. dominant forms of social production; 4. volumes of social production;
5. the level of scientific and technological development and equipment of the national economy;
6. growth rates and development of the national economy.

Supply factors in the labor market

The supply on the labor market is formed under the influence of the following main factors:

1. the average level of wages;
2. the number of the population and the overall demographic situation;
3. professional structure of the labor market (consists in an overabundance or lack of certain professions);
4. structure and quality of the education system;
5. population mobility (migration within and outside the country);
6. ethnic, religious, cultural, psychological characteristics of the population;

The supply of skilled labor is generally more stable than demand, and skill mismatch is often perceived as a situation where the supply side is not able to respond to demand flexibly and quickly enough.

Information system of educational institutions

The use of labor market information requires an infrastructure to collect, analyze and disseminate data, as well as training staff and partners of JASU who will work with data and conduct analysis. Accordingly, building the capacity of educational institutions should include improving the information system of educational institutions, training analysts from among teachers, administration, involving partners in the collection and analysis of information (for example, members of expert groups), conducting appropriate activities to inform and build the confidence of stakeholders. Educational institutions should develop and implement a communication strategy to promote educational services with the involvement of appropriate financial and human potential.

The role of stakeholders in the collection and analysis of labor market information

The policy in the field of vocational training education is most effective when it is coordinated with the policies in the field of employment, social protection, as well as with the economic (industrial, investment, trade) policy of the country.

The role of JASU

Labor Market Information provides JASU with the data so they can play a critical role in ensuring timely responses to labor market needs and building the workforce of tomorrow. Employment skills are rapidly evolving, and the impact of technology and globalization on jobs puts skills at the top of today's educational agenda to make the most of the opportunities provided by the regional cluster development of the Kyrgyz Republic's economy.

In order to prepare qualified personnel in accordance with the requirements of the labor market, based on the principle of lifelong learning, JASU should create and develop partnership networks with both employers and educational institutions primary and higher professional

education. This collaboration will facilitate the sharing of labor market analysis resources to prioritize the labor market in order to provide learning and career paths.

Role of employers

Improved linkages between the education students receive in schools and practice in the workplace can help avoid the risk of skills shortages or surpluses, which can lead to unemployment and underutilization of skills. Understanding future trends and demand for skills and knowledge can positively influence the interaction of the university, employers, individuals and, ultimately, the economic prosperity of the Kyrgyz Republic.

Representation of associations and associations of employers by industry in the regions are effective mechanisms (information links) of interaction between the regional labor market and JASU. Close relationships of JASU with branches and representative offices of large associations will provide timely information on the needs of the relevant sectors of the real sector of the economy in order to correlate the proposed educational services with the requirements and expectations of enterprises, organizations, farms and individual entrepreneurs.

The role of government bodies

Education policy makers, together with partners, can and should take steps to increase the availability of data on labor market needs in forms that can be easily used and compared with results from similar institutions and programs, and to protect the privacy of individual alumni or partners who participates in the analysis of the labor market.

In turn, educational institutions can use the information of the territorial divisions for the promotion of employment of the Ministry of Labor and Social Development of the Kyrgyz Republic, which provide complete information about the vacancy, employer, working conditions, working hours, and the requirements that apply to the job seeker in the local labor market. Also, territorial divisions provide information on the situation on the labor market and the services provided. <http://zanyatost.kg/Page/PageShow/1017>.

One of the two main sources of supply of skilled labor in the region are job seekers who may have been trained in any type of vocational training institution or learned on the job. An external sign of professional suitability is a statement of a person about his previous professional experience and interest in finding a job in this profession. These two features are taken as the basis for registering a job seeker as "skilled in the profession" and representing a skilled labor supply. e ILO project proposes Form 11, which is drawn up for all qualified personnel who have applied to the employment centers of a given area regarding the search for work. These persons must be registered and information about their profession or professions for which they consider themselves competent and are seeking employment must be recorded. It does not matter if the working professions were mastered in lyceums or in the workplace. For the qualification levels "technician" and "professional" the presence of education in the profile is mandatory.

Data on the number of persons by profession who applied to employment services are used in the final calculations as part of the "current unemployment" indicator, which includes the ratio of those who applied for job search to the number of people employed in the regional economy in this profession. A high value of the indicator (10% or more) indicates an excess of qualified personnel in this profession.

In the collection and analysis of information on the needs of the regional labor market, state executive bodies of the Kyrgyz Republic, mayor's offices of cities and their heads, authorized representatives of the Government of the Kyrgyz Republic in the regions and local state administrations can also assist educational institutions. The involvement of representatives of local governments in the development and implementation of the strategy for the development of educational institutions will contribute to the exchange of information on the socio-economic needs of the regions.

II. Review and analysis of information on the labor market and the needs for personnel in the labor market as a whole for the country and regions

Skills and competencies have become much more important in the labor market as professions/occupations are now seen as a set of skills that can change. It may be very difficult to choose an occupation of a lifetime, but it is much easier to acquire valuable, useful skills if one has some understanding of job market trends.

Both young people and adults should accept learning and training as an integral process (stage) throughout their careers.

Today, thanks to the policy of openness and transparency of the Government of the Kyrgyz Republic and partial access to the Internet, a large amount of information about the labor market is revealed. Government bodies carry out information work to help people make decisions (at all levels), international organizations also support access to information by providing the results of their research on the labor market.

JASU needs to improve its capacity to source information and use data on labor market needs in shaping development policy and identifying or revising training courses.

Information about the labor market

Labor market information can be of two types: quantitative and qualitative.

Quantitative information

Quantitative information about the labor market can be taken from studies that cover the entire population - for example, the population census that will be conducted in 2020 in the Kyrgyz Republic and will include all residents of the Kyrgyz Republic, or a sample of the population - for example, "Analysis of the current state of the labor market and labor productivity" conducted by the National Statistical Committee of the Kyrgyz Republic together with the Institute for Statistical Research and Advanced Training of the National Statistical Committee of the Kyrgyz Republic in 2019.

Thus, information about the labor market can be obtained quantitatively, based on statistics, in the form of the results of a thorough research methodology. Such studies are conducted by the state, for example, the study "Labor Market of the Kyrgyz Republic as of October 1, 2019" conducted by the Ministry of Labor and Social Development of the Kyrgyz Republic. Similar studies are also carried out by specialized research institutes and organizations or with the support of international donor organizations.

Qualitative Information

usually taken from interviews, focus group discussions, or similar events (round tables, etc.). Educational institutions can also obtain qualitative information from various sources, such as articles in newspapers, information portals, partnership networks, their own observations and information about the local labor market.

When using information about the regional labor market, the Quantitative should check the accuracy of the information.

Information formats

Information about the regional labor market can be provided in different formats: in the form of graphs, charts, tables. The data used to create charts, graphs, tables can be taken from the official websites of state bodies (for example, the National Statistical Committee of the Kyrgyz Republic, the Ministry of Labor and Social Development of the Kyrgyz Republic), where you can find labor market profiles and labor market reviews throughout the country and regions or in research reports, conducted by other non-governmental (eg <http://siar-consult.com/service/>, <http://www.m-vector.com/services/>,) and international organizations (eg ILO https://www.ilo.org/skills/projects/g20ts/WCMS_635736/lang--en/index.htm) .

The results of such studies are also announced through the media and websites of relevant organizations. types of labor market information that university schools can use include:

- The official policy of the Kyrgyz Republic on the socio-economic development of the country - <https://www.gov.kg/ru/programs/all>:

- National Development Strategy of the Kyrgyz Republic for 2018-2040 <https://www.gov.kg/ru/programs/5>

- Development Program of the Kyrgyz Republic for the period 2018-2022 “Unity. Confidence. Creation” <https://www.gov.kg/ru/programs/6>

- The concept of the regional policy of the Kyrgyz Republic for the period 2018-2022 <https://www.gov.kg/ru/programs/2>

- Official websites of ministries, public services, agencies;

- Articles and publications of the National Institute for Strategic Studies, which is engaged in the implementation and development of a system of high-quality scientific and analytical consulting for the highest authorities, contributing to the development of evidence-based, detailed and balanced government decisions: <http://www.nisi.kg/produkt-nisi/publikatsii.html>

- Official population statistics - currently working on the demographic composition of the population and the potential impact on future enrollment. Sources include data provided by the National Statistical Committee of the Kyrgyz Republic (<http://www.stat.kg/ru/statistics/naselenie/>)

- Job creation data - to understand the economic profile (sectors, scale), labor market and vacancies. Sources include national surveys of the National Statistical Committee on the number of employed population (<http://stat.kg/ru/statistics/zanyatost/>) and the overall unemployment rate;

- Ministry of Labor and Social Development: <http://zanyatost.kg/Page/PageShow/1002> The State Employment Service is engaged in the provision of public services in the field of employment promotion and unemployment protection. <http://zanyatost.kg/Page/PageShow/1014> contains contact details of territorial divisions throughout the country;

- Studies of the Ministry of Economy of the Kyrgyz Republic on the development of regions <http://mineconom.gov.kg/ru/section/document>;

- Authorized representatives of the Government of the Kyrgyz Republic in the regions and local state administrations provide information on regional economic development, for example, <http://feznaryn.kg/ru/prioritetnye-vidy-deyatelnosti>. Their information has a great influence on the planning of educational services of educational universities in the regions.

Educational institutions can receive information on the development prospects, taking into account which it is possible to regulate the professional training of personnel, the training of qualifications that are in demand in the region.

- Information portals <https://yellowpages.akipress.org/cats:137/>

- Chamber of Commerce and Industry of the Kyrgyz Republic <http://www.cci.kg/nezavisimaja-sertifikacija.html>; <http://www.cci.kg/podderzhka-biznesa/regionalnye%20predstavitelstva%20tp%20kr.html>

- JIA (Jashtar Ishker Associations) <https://jia.kg/biznes-i-gosudarstvo/> can assist in establishing direct contact between employers and educational institutions in order to train future professional personnel, promote participation of employers in the process of training and assessment, as well as certification of graduates;

- The open data portal of the Kyrgyz Republic is one of the key tools for implementing the state policy in the field of open data, which is assigned the role of a backbone element, the core of the open data ecosystem of the Kyrgyz Republic. The Portal concentrates the most up-to-date information about open data of state authorities, regional authorities and other organizations, contains documented data sets, links to published data sets. Communication interfaces for interaction with organizations acting as owners of socially significant data are also implemented here (for example, a list of business associations: <https://data.gov.kg/ky/dataset/spisok-biznes-associacij/resource/9d2f9165-7bf0-4b33-9b5c-e7b1c183c75a>; list of investment projects by

region: <https://data.gov.kg/ky/dataset/spisok-investicionnyh-proektov-s-regionov-dlya-investicionnyh-lotov/resource/18a855ea-8cf9-4873-a77c-ccabbf9f3a77>

III. JASU Alumni Tracking

JASU, by regularly collecting information about the position of their graduates in the labor market, receive valuable information about the quality of their offer. The results of the Alumni Tracking Study help determine:

- o whether graduates are adding to the skilled workforce as planned;
- o whether graduates consider their training satisfactory.

The data obtained from the results of the survey of graduates helps to adjust the curricula (learning outcomes, module content, teaching materials) of educational institutions in the areas of training or modules for the formation of relevant skills (expected learning outcomes) taking into account the needs identified in the regional labor market.

JASU is encouraged to use the alumni tracking methodology tested in the Kyrgyz Republic. The Alumni Tracking Guide, approved by the Primary Education Agency under the Ministry of Education and Science of the Kyrgyz Republic http://kesip.kg/docs/tracerstudy_guide_rus.pdf, contains practical recommendations for organizing and conducting the process of collecting and analyzing data on graduates. The Alumni Tracking Guide suggests that tracking be done in two stages: 1st at exit, during the graduation period, and 2nd, 9 months after graduation. In accordance with the tested approach, the following steps are proposed for tracking graduates with the definition of implementation dates:

1. Preparation of the personnel involved in the process;
2. Preparation of students of the last year of study;
3. Creation and updating of the contact database;
4. Data collection stage for exit and employment surveys;
5. Entering data into the online platform, in case of using paper questionnaires;
6. Analysis of the collected data of two phases;
7. Presentation and discussion of the results of tracking in the educational institution of two

phases.

Alumni Tracking Responsibility

In order to conduct a study on tracking graduates of JASU, it is necessary to create a group with the following functions:

- project coordinator (training expert; contact person);
- members of the expert group with the following responsibilities: project management; IT (online questionnaire); preparation of reports and presentations; statistical analysis;
- external partners.

It is also necessary to decide which structural unit of the university will be responsible for conducting alumni tracking.

According to the ETF, taking into account international experience, a wide range of organizational solutions is possible. In educational institutions, Career Development Centers can do the tracking (from the experience of Indonesia and Hungary). In some foreign countries, such as Germany, graduate tracking studies are carried out by departments responsible for quality management. Because these units also regularly conduct other surveys (such as course evaluation, student and teacher surveys) and they are a kind of research centers. In some institutions, research staff from the departments of social sciences or education collaborate to conduct alumni tracking research together. There are also examples where alumni affairs units are responsible for conducting alumni tracking.

Database creation

In the final year of each program, it is recommended to create an alumni contact database in an Excel spreadsheet. The database should contain all the basic information about the graduate and his contacts:

- full name of the graduate;
- Gender of the graduate (female/male);
- Training group (directions of training);
- E-mail address of the graduate;
- Cell phone number;
- Landline telephone number;
- Social networks used by the graduate;
- Parent/guardian contact details, including phone numbers;

Before starting the tracking process, it is necessary to check the contact details provided by the graduate in the database. If inaccuracies are found, it is necessary to make changes to the database. The first contact with the graduate should be to inform him about participation in the tracking, about the employment survey and to motivate the graduate to take part in it. Data collection approaches

Alumni tracking can be done using the following approaches to collect information about alumni:

- On-line questionnaire;
- Paper questionnaire;
- Telephone interview;

Telephone interviews are used more often in cases where graduates have limited access to the Internet (especially in remote areas).

Usefulness of Alumni Tracking Results

JASU, through regular alumni tracking surveys, receive valuable insights into the quality of their programs and recommendations for improvement.

As a result of monitoring, improvements can accordingly apply to other areas of activity of educational institutions that have an impact on the implementation of programs and the achievement of learning outcomes by graduates.

Key Research Questions / Objectives

In accordance with international practice in tracking graduates, studied and summarized by the European Training Foundation in the Guide to Predicting and Matching Skills and Occupations, almost all tracking studies should answer the following questions:

- What happens to graduates after studying/graduating from an educational institution?
- Were they able to get paid work at a reasonable time?
- Do they use the skills and knowledge that they have acquired during their studies/in an educational institution? If not, what are the reasons?

- What skills and abilities are required in the labor market?

Such questions are usually covered by the two main objectives of alumni tracking research:

1. to measure the employment of graduates (information on the labor market); main topics: employment situation;

the time it took to get the first job;

the duration of the job search;

salary / income;

position;

economic sector;

main work tasks / responsibilities;

working hours;

job satisfaction;

use of competencies and required competencies; o the usefulness of the training/curriculum;

2. collect feedback from alumni to improve the curriculum (retrospective evaluation); main topics:

additional education and training (educational trajectory);

the need for further education and training;

evaluation of training / curriculum;

strengths and weaknesses of the training/curriculum;

Suggestions for improvement.

The content of the alumni tracking surveys (questionnaire) can be flexible and easily customized to the specific needs of individual institutions or training/study programs. The questionnaires proposed by the ETF in the Skills and Occupations Prediction and Matching Guide, Volume 6 can be used as a model.

The ILO Project also proposes a methodology for collecting information on the number of graduates by professions and qualifications per year and their entry into the labor market. According to the recommendations of the ILO Project, information on the number of graduates from lyceums and colleges should be collected annually by profession and regularly submitted to the MLSD. However, collecting information on the status of graduates of educational institutions (especially colleges) in the labor market in the year of graduation is an expensive undertaking. Therefore, estimates collected in earlier years can be used over a number of years. These data need to be updated as new surveys of graduate retention in the labor market by profession become available.

The role of graduates of vocational education systems in filling current and expected vacancies depends on the number of persons wishing to join the labor market (in any profession) in the year of graduation. A large absolute output of personnel can eventually be transformed into a small number of graduates who want to work in the year of graduation. The rest of the graduates may continue their studies at universities, or for other reasons not be part of the labor force in the year of graduation and therefore are not considered part of the labor force supply.

The practical application of the ILO methodology is aimed at reducing the risks of an excess and shortage of qualified personnel by profession, taking into account the current and projected demand for personnel in the labor market. The methodology does not deal with processes that are automatically and successfully carried out by the market forces themselves to provide enterprises with free personnel looking for work. The methodology is aimed only at those processes and professions where the labor market fails to maintain a balance between supply and demand, resulting in a noticeable surplus or shortage of qualified personnel. Only by identifying such deviations, it is possible to offer recommendations to the vocational education system, since the release of new personnel can itself be the cause of an excess or shortage of personnel.

IV. Direct survey of employers

JASU conduct surveys among employers to obtain reliable information about the needs for personnel in the regional labor market. Monitoring the problems of improving the efficiency and quality of services in the field of secondary vocational education with the participation of stakeholders, employers helps to identify the requirements for the skills and knowledge of JASU graduates, thereby providing information on the need to train new specialists, new skills associated with innovative production technologies.

In order to conduct the survey, educational institutions should conduct a random sample and determine the range of employers to be included in the survey. The sample should be reasonable and sufficient, at the same time not so large in view of the limited resources of educational institutions. The content of the questions should also be formed in such a way that the employer can easily answer without difficulty.

Contact details of employers in the local labor market can be found on the open data portal, the Akipress information portal, and government websites.

Questionnaire for the survey of employers

Dear respondent!

We invite you to take part in a survey of heads of enterprises and organizations in order to understand the expectations of employers regarding the training of specialists.

The purpose of this survey is to obtain information about the opinions of employers about the current and future needs of the market for specialists, the mechanism of interaction with JASU

Please carefully read the questions below and their answer options (do not skip any!) and circle the answer that most accurately reflects your personal point of view. (If the question of the questionnaire does not indicate that there can be several answers, then mark only one option).

1. What is the legal form of your enterprise / organization?

- a) government organization/institution _____
- b) ministry, committee, department, department _____
- c) commercial enterprise/institution _____
- d) non-profit enterprise/institution _____

2.

Sector/industry

3. Specify the number of employees of your organization

- a) from 5 to 20 people _____
- b) from 20 to 50 people _____
- c) from 50 to 200 people. _____

4. Of which women ____ / men ____

5. How many graduates work with the qualification:

- a) JASU _____

6. How many employees will the company need in the next 3 years? (Please, indicate)

- a) Specialty _____
- b) Profession _____
- c) Of which women ____ / men ____

7. What form of education is most suitable for you?

- a) Modular programs (for diploma/certificate)
- b) Business seminar
- c) Trainings
- d) Refresher courses

8. Which of your specialists are you willing to train?

- e) Managers _____
- f) Technical specialists _____
- g) Financiers _____
- h) IT specialists _____
- i) Logistics _____
- j) Other _____

9. Your suggestions for improving curricula
