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From University to Labor Market in the 21 century: a step forward in work-based placements -UniLab

WP 3.1. PROTOTYPE OF EDUCATION MODEL

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From university to labour market in the 21st century: a step forward in work-based placements
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UniLab consortium members:

- European university continuing education network, eucen (BE)
- Pompeu Fabra University - Barcelona School of Management (ES)
- University of Lille (FR)
- IMC University of Applied Sciences (AT)
- Financial University under the Government of the Russian Federation (RU)
- Siberian Federal University (RU)
- Orenburg State University (RU)
- Almetyevsk State Oil Institute (RU)
- Gomel State University named after F. Skorina (BY)
- Mogylyev State University named after A. Kuleshov (BY)
- Khazar University (AZ)
- Azerbaijani State University of Oil and Gas (AZ)

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Acronyms:

WBL – work-based learning

MA – Master of Arts

BA – Bachelor of Arts

PEdM – Prototype of education model

RU – Russia

AZ – Azerbaijan

BY – Belarus

UniLab WBL Model – UniLab work-based learning model

PS – professional standards

FSES – Federal State Educational Standards

A. Introduction

For many years higher education area had been focused on knowledge transfer to students to succeed after the graduation in science, business and production. The Soviet system of education was mainly concerned with building up fundamental knowledge on the solid theoretical ground for the graduates to be later employed by the state budgetary organizations in the industrial, agricultural field or scientific institutions. The system of work-based learning (the term did not exist back in the Soviet system of education) was widely applied in the form of students' practices according to the students' majors. After the dramatic change in the political social and mainly economic spheres of the Soviet Republics, the adopted approaches and contents of work-based learning could not meet demands of the emerging labor market, which from that moment on has been shaped by the capitalistic paradigm rather than planned economy. Thus, the newly established labor market has been in a huge demand for employers equipped with different skills and trained in business. The labor market shifted from theory-oriented learning to practice-oriented learning.

Higher education institutions in the post-Soviet era confronted with a new challenge, where they had to redesign education programs, introduce a set of new concepts (work-based learning, competencies, student-oriented learning, learning outcomes and others), work out various types and forms of cooperation between labor marker and higher education institutions. Due to all these the changes many higher educational institutions have lost the assigned and agreed on places of practice in accordance with the profile of training as a result of closure of many factories and failure of entire economic industries and sectors. Along with internal processes, quickly developing cyber space and globalization have contributed to the labor market changes. As a result, there is a shortage of qualified, practice-oriented personnel in post-Soviet countries **UniLab** is focused on – Russia, Belarus, Azerbaijan - who can successfully develop knowledge-based technologies and at the same time perform real business processes.

The present situation increases the gap between the higher professional education and labor market. To bridge the gap between the two, higher education institutions need to develop new work-based learning programs and methods to enable students to get professional experience and practical training from the early stages of Bachelor programs. New programs and methods of teaching should be tailor made for the demands of the modern labor market, embedded with practical training in a variety of forms encompassing students' practices, lecturers from the real business sectors and other forms of involvement of companies.

UniLab will concentrate on one of the components of work-based learning for the current students and work placement for the fresh graduates. In order to enhance graduate skills levels and ensure a smooth and effective transition between university and enterprise areas, there is a need to increase opportunities for students to acquire relevant work experience during their studies as well as arrange efficient models to enhance the recruitment of university graduates.

Thus said, WP3 aims to enhance penetration between the higher education area and labor market in two dimensions – through modernization of the existing education programs by means of competencies update and development of extra-curriculum activities to equip students with the demanded soft skills.

WP 3.1. is focused on the development of Prototype of Education Model and update of the current educational programs at Bachelor and Master levels in the following areas:

a. IT
b. Management
c. Finances
d. Engineering (Oil and Gas)
e. Public Relations and Advertising

WP 3.2. deals with extra-curriculum programs comprising for modules:

a. Self-understanding;
b. Job opportunities, thriving at workplace;
c. Entrepreneurship and self branding;
d. Managing work pressure and problem-solving.

The present document describes the Prototype of Education Model (PEdM) the constituent parts of which are the generic and subject-specific competencies that are required by the labor market in the XXI century. **UniLab** Program Countries (Russia, Belarus, Azerbaijan) have conducted a survey within the core companies consortium members have been partnering with to identify the gaps between the competencies acquired within the education program and the labor market needs. The methodology of the survey and the results obtained in RU, BY and AZ are presented in the relevant section D.

The revised competencies will be used to update the existing education programs to bridge the gap between academia and labor market, theory-practiced learning programs and practical skills expected of the university graduates. The updated education programs will accelerate students employability chances, and the labor market will get professionals that do need to be re-trained at the working place. In general, this measure will lead to the improvement of the quality of education, aligning companies and higher education institutions. Graduates will improve their personal and professional qualities and expertise.

WP 3.1 is implemented by means of:

a) Conducting the research with the employers, sharing the results, transforming them into the guidelines
b) Providing executive summary of the research outcomes to the HEIs administration and governmental bodies
c) Designing the prototype of education model

The prototype of education model will be created as open information resource and will be uploaded to **UniLab** website. The outcomes of this WP will be presented at the **UniLab** workshops in Moscow, Mogylev and Gomel and final conference in Russia. University leadership will be encouraged to enhance the transition to work-based learning by the executive summary that will be presented to the university leadership featuring the results of the survey and containing recommendations of what needs to be changed to align academia and labor market in the majors IT, Management, Engineering, Finanaces, Public Relations and Advertising, Oil and Gas.

As a further development of WP 3 **UniLab** consortium is going to introduce UniLab WBL Model that will consolidate the outcomes of all the WP 3,4,5 and present a holistic approach to work-based learning transition in higher education institutions.

Since **UniLab** project is being performed by a number of institutions coming from different regions and using various terms to denote the key concepts applied in the project, it is important to clarify and agree on the common meaning and understanding the same notions and ideas behind the main concepts of the project. The Glossary of terms below has been created as a tool to elicit the meaning agreed on by the consortium members.

Term	Short definition
UniLab WBL Model	Innovative student-centred model aimed at refinement of work-based practices for current students and work placements for fresh graduates, development of students' employability, and promotion of entrepreneurial skills in the context of the universities' missions.
Prototype of education model	A set of recommendations on how to update educational program in terms of generic and subject-specific competencies presented to the university leadership on the basis of the data collected from the labor market.
Apprenticeships/student practice/internship	This is a combination of on-the-job training and classroom learning that leads to practical skills acquisition by the students of HEIs.
Model in education	An ideology of what teaching and learning process entails; it is an informative representation of an educational system.
Educational program	A program written by the university or which determines students' learning progress of the specific subject in all the stages of formal education. The educational programme

	consists of a carefully planned and well-executed curriculum that includes appropriate academic standard, solid pedagogy, and assessment, all based on research and best practices. The educational program is aligned with the university's mission, and periodically reviewed by stakeholders. It is developed to address the needs of all students and is designed to foster and challenge students at all levels.
Work-based learning	Educational strategy that provides students with real-life work experiences where they can apply competences and skills to develop their employability.
Prototype	A typical example, a model built to test a concept or process. Prototyping serves to provide specifications for a real, working system.
Key competences	The basic set of knowledge, skills and attitudes which all individuals need for personal fulfillment and development, active citizenship, social inclusion and employment, as described in Recommendation 2006/962/EC of the European Parliament and of the Council.
Transversal (soft/life) skills	The ability to think critically, be curious and creative, to take initiative, to solve problems and work collaboratively, to be able to communicate efficiently in a multicultural and interdisciplinary environment, to be able to adapt to context, to cope with stress and uncertainty.
Generic competencies	Generic competencies are regarded as knowledge, skills and attitudes a person can apply in various fields or contexts regardless of discipline, and are considered essential for managing one's everyday life as well as increasing one's employability (Cox & King, 2006, Future Work Skills 2020, 2011, Tomlinson & Holmes, 2017).
Subject-specific competencies	Competencies in subjects describe the unique ways in which competencies are drawn upon and applied within each subject.

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B. Work-based learning best practices of the European Union

Work-based learning is a key concept and destination of the European higher education system, which aims to increase substantially the number of apprenticeships and traineeships to ensure that they represent real opportunities for young people to raise awareness of the labor market demands and integrate the anticipated skills and knowledge into education programmes. This form of education can meet the twin goals of improving individuals' employability, the quality of education and enhance cooperation between academia and business. Creating opportunities for high-quality work-based learning thus lies at the heart of current European education and training policies. A lack of workplace experience and the related skills and competences is one of the factors contributing to the "skills gap" in the EU today.

According to the guidelines “Work-based learning in Europe” issued by the European Commission there are 3 models of WBL adopted in the European HEIs:

1) **Apprenticeships**. These are fundamentally based on the integration of companies as training providers together with higher education institutions. In these programmes, learners spend a significant time on training in companies. In parallel, or in "alternating" periods, they acquire general and occupation-related knowledge and often complementary practical skills and key competences in universities and other institutions.

2) **On-the-job training periods in the companies.** On-the-job training periods typically cover internships, work placements or traineeships that are incorporated as a compulsory or optional element of HEIs programmes leading to formal qualifications. They can be of varying duration but typically represent less than 50% of the training programme duration (often around 25-30% or less). They are primarily intended as effective university-to-work transition mechanisms that allow young people to familiarise themselves with the world of work and thus facilitate their transition from education to employment.

3) Finally, **WBL that is integrated in a university-based programme**, through on-site labs, workshops, kitchens, restaurants, junior or practice firms, simulations or real business/industry project assignments. The aim is to create "real life" work environments, establish contacts and /or cooperation with real companies or clients, and develop entrepreneurship competences. In this model, universities have the main responsibility for creating close to real life or real life working environments. Thus, universities are equipped with school workshops, labs, kitchens and restaurants, or cooperate with business and industry to use their facilities. The mandatory share of learning in these working environments varies, depending on the type of university. Work in practice firms or junior firms and real-life project assignments are frequently used and often form mandatory parts of curricula. Teachers design learning activities in cooperation with companies: they need to develop the skills to work in multidisciplinary teams and focus on workprocess orientation, innovation and creation processes.

There three models above are most commonly applied by the EU higher education institutions, although on top of those three models every institution develops and successfully applies their own approaches and models. UniLab Partner Countries universities were requested to share their unique experience in WBL programs arrangement and cooperation between university and labor market.

i. Austria

Austrian system of education and WBL practices in UniLab is represented by IMC University of Applied Sciences Krems.

WBL is defined there as a concept allowing students to gain practical experience in the field, and gathering expertise based on solving real-world problems. For the University of Applied Sciences in Krems, WBL is one of the fundamental principles for the learning experience. WBL guides the processes of curriculum development and the daily operations in the study programs.

The typical form of WBL is an internship. Students in all study programs have at least one semester of mandatory internship, in which they go to external institutions (companies, research organizations and government entities) and spend their time working in the field. Additionally, students are often taught by experts from industry, who bring first-hand knowledge, examples and exercises from the real-world. So students are confronted with their future work early on during the study program.

University of Applied Sciences of Krems monitor labor market on a permanent basis to be able to track the changes in the competences requested from the graduates and other relevant tendencies. The contemporary labor market is analyzed as part of the development program for each study program. Before a new degree program is offered, the job market, and similar offers of other academic institutions are analyzed to identify the gaps which may exist in the job the market. The result of such studies are used to define the focus areas of study programs, to ensure that the graduates of the corresponding study program have high employability rates. In addition to the considerations put in developing the study program in the first place, the **situation** in the Job market is evaluated every five years for each study program to see whether any curricular adjustments are required to address the changed market.

The pandemic has forced the University to operate mostly in online-mode, where the lectures had to be moved to virtual classrooms. Apart from that, it has become more challenging for students to find internships.

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ii. France

French higher education system in UniLab is represented by the University Lille. WBL is denied there broadly speaking as learning at workplace. It means that the workplace is not only a place where the students will apply what he/she learned at university, but it is a place where he can learn and get back to university with these new learning outcomes.

In University of Lille WBL is part of the curricula, either in case of dual-studies, or for the internship, in work-simulated situation (Health care). The professional integration is part of the studies (compulsory for the accreditation). Concerning Vocational Training, the recent law 2018, introduce "training at workplace" which is part of the learning experience in a work-based situation : Formation en Situation de Travail. It has a specific meaning then, since it deals with "workplace" and "employees or newcomers in a company, fresh graduate" who are trained by a "tutor" and this training is not "a on-the-job training". The time allocated to this specific training has to be disconnected from the production.

The main forms and instruments elicited by Lille University that are used to integrate WBL into learning programs are:

- Internships
- Entrepreneurships
- Unit of Teaching compulsory (except in Health, specific courses) with extra curricula linked to the professional pathway
- Teachers/trainers among the world of work : they bring some real-experience teaching in a curricula (min. compulsory in each diploma)
- Simulated workplace (Health)

University of Lille has been monitoring labor market on a regular basis to track changes and tailor education programs to equip students with the relevant skills and competences. One structure is in charge of the analysis of the labor market but more in the perspective of integration of graduates in the labor market.

ODIF : observatory of LLL, through enquiry

- Integration of students, graduates, early-leavers
- Orientation, guidance (college-university, high-school, success, etc.)
- Evaluation of diploma and of teaching

Concerning the competences, we have a national register for National Diploma, and specific inventory for Professional Certification (RNCP). This last inventory is compulsory for the funding of the Vocational Training Programs.

Updating study programs in terms of competences is a compulsory work made by university. For the accreditation of diploma, University of Lille has to give the proof of the benefits of the training in terms of "employment", and of competences relevant for the labour market.

Due to pandemic, special attention was attributed to the support of WBL strategy, much efforts invested to support the students, apprenticeships contracts, internships were maintained as far as possible.

iii. Spain

Spanish higher education system is represented within UniLab project by the grandholder EUCEN and the Barcelona School of Management of the Pompeu Fabra University (BMS) that extends and shares its expertise in the field of work-based learning.

BMS links WBL to extra-curricular activities (workshops, internships, networking) that provide students with the tools and skills to improve their employability and their professional competencies, while accomplishing their graduate studies.

The main forms and instruments of WBL used by BMS are:

- Internships in companies;
- Advice and support to develop their CV, how to prepare job interviews and how to improve their networking in the form of career advisor and workshops, as well as some specific activities for improving those skills.

The analysis of the contemporary labor market needs, monitoring of the emerging needs is performed by the BSM career center. Apart from that, all the activities with the laboar market are designed, coordinated, and deployed by the career center of the BSM.

BSM career center collects mainly information from labor market through direct contact it has with different companies that collaborate offering internships for students. Additionally, companies offer internships through jobteaser, a digital platform where all data is collected from companies, in relation to their job offers. This information is analyzed and then informed to the different academic departments to address specific skills in the academic syllabus of the program's subjects.

Also, BSM interact with the career center of Univesitat Pompeu Fabra (UPF), since BSM it's a branch from the UPF. The UPF career center develop different types of research in the labor market to understand the dynamics of the market, as well the real companies' needs, in order to include these skills in the academic programs offered through the University and also in the form of workshops specifically designed by the career center and offered to the students. On a normal basis, there is a very close collaboration between UPF and BSM in these endeavors.

As for the study programs upgrade on the basis of the competences analysis BSM issues annually a report of program performance to academic directors and changes (minor and major) that are proposed to the academic secretary of the BSM. They will go through the report and will approve or reject changes, to implement in the next academic year. If changes are minor, normally they are accepted and test it. If changes are major, they need to go through a more complex process, that implies changes in the

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program that had to be approved by the ministry of education of the Spanish government, so it takes longer to implement those changes and updates in the program.

Pandemic has had a significant impact on education since there was a change to make more work on distance and at the beginning of the pandemic many companies which just to offer internships stopped the collaboration temporarily.

Today BMS has a large number of students again in internships (on distance and in presence). And basically, most of the activities that were supporting the skills development of students are again offered.

Conclusion

For the European higher education institutions WBL programs and practices is a win-win situation both for academia and labor market leading to positive changes and prosperity of national economies and eradication of unemployment and poverty. Another side-effect of early professional involvement is in-time assistance to students to encounter real-time professional experience and become aware of whether the chosen profession al path is the right one, and in case it is not, to be able to change the professional destination.

UniLab Program Countries members (University of Lille, University of Applied Sciences of Krems, Pompea Fabra University) pay special attention to WBL programs and practice-oriented learning in general, believing ii to the one of the fundamental principles of learning in the 21 century. All the universities have WBL as an integral component of the study programs. The most widespread form of WBL is internship, entrepreneurship, lectures developed by the experts in the field. All the universities involved have been monitoring labor market to trace the emerging requirements and changes needed to the study programs in competencies, methods of teaching and forms on cooperation with industry.

There is a number of benefits main stakeholders get from WBL and student internship in general (See Table 1).

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Students	Employer	University	Society
• Develop deep professional expertise; • Build skills and competences required to operate in a workplace, including transversal, such as communication, critical thinking, team work, problem solving and others; • Informed career choices; • Develop career management skills; • Enhance self-sonfidence and motivation; • Get first working experience which facilitates entry to the labor market.	• Positive impact on supply of qualified labor; • Addresses skills gaps through tailor made training programs; • Positive effect on recruitment and retention • improved productivity and performance • Positive effects on employed staff development.	• Improved attractiveness of university study programs; • Better quality of sudy programs and learning outcomes; • Positive effect on teaqching staff competences and development; • Better cooperation between academia and labor market.	• Skilled labor force that responds better to the labor market needs; • Contribution to innovation and creativity; • Development of small scale business; • Strenthening of social inclusion and improvement of equal opportunities.

Table 1. WBL benefits for the main stakeholders.

C. Work-based learning in non-EU countries

The previous analysis of the experience of the European higher education institutions in WBL component in the curricula has revealed that WBL plays a key role in education programs. European universities strive for the enhancement of cooperation between academia and business through a number of incentives linked to WBL, like internships, apprenticeships, on-the-job training periods, involvement of professionals from the industry as lecturers and other initiatives.

At the same time education system of the post-Soviet countries is being marked by many experts as excessively theoretical, which is hard to deny. In the present section we will have a closer look at the state of affairs with WBL in UniLab Partner Countries (Russia, Azerbaijan and Belarus).

i. Russia

Russian national system of education prioritizes practice-oriented learning to meet the demands of the modern labor market. WBL plays a crucial role on the modernization of the system of education. Russian HEIs study programs aim to equip students with competences that will ensure their successful employment and further work in a company. WBL is defines as a strategy that enables students to get professional experience while they study to develop their generic (soft) and subject-specific skills. Some Russian researches define WBL as a didactic approach in teaching based on the unity of emotional, visual and logical aspects of learning, acquisition of new knowledge and formation of practical experience of its application, enhancing emotional and knowledge-based components when completing non-standard tasks.

The Ministry of education of Russia issued decree dated 03.08.2000 N 14-55-484in / 15 “On Recommendations for the organization of practice for students of educational institutions of higher professional education” where WBL strategy is deployed in the form of student internships that have got three distinctive forms: educational, industrial and pre-diploma practice.

Educational practice may include several stages. For example, introductory practice in organizations of any legal entity, practice in obtaining primary professional skills in training workshops, university laboratories, etc. The list of training practices for the main educational program of higher education institution is determined by the university.

Industrial practice includes, as a rule, the following stages: practice according to the profile of the specialty (technological, performing, etc.), scientific research, scientific and pedagogical practice.

Pre-diploma practice as part of the main educational program is the final stage of education and is carried out after the student has acquired main theoretical knowledge.

The present WBL practice cannot be implemented without the application of competence-based programs by universities. Although there is no definition of competence stipulated in the legal documents, competence is mainly defined as a set of interrelated personal qualities (knowledge, skills, methods) that are acquired in relation to a certain range of objects and

processes and are required for high-quality productive manipulation with those objects or processes. At the same time, competence should be understood as the ability to mobilize one's knowledge and experience to solve specific problems in the profile of future activities. Unlike traditional education, focused on the accumulation of knowledge, practice-oriented education is aimed at acquiring practical experience by the student, ensuring students efficient actions and operations based on existing knowledge, skills and abilities.

During internship, students gain experience in professional activities as interns or observer of a specialist: study of production technology, familiarization with the technological equipment of the product manufacturing process, features of control and management of the technological process, etc. Experience through solving a specific production problem under the guidance of a professional in accordance with an individual assignment.

In the period preceding the internship, it is advisable to involve professionals from industry to enhance the motivation for learning among students, including the period of course papers' writing with involvement of real tasks and a problem-solving approach to an exciting challenging situation in a company.

During the period of pre-diploma practice, student acquires sufficient knowledge and experience under the guidance of a specialist in order to start fulfilling professional duties without a lengthy additional training at a particular workplace. In this case, an individual task for undergraduate practice should be aimed at solving a real production problem, which should then become the practical case for the final diploma thesis.

Such WBL approach can exist only if there are permanent places of internship in accordance with the agreements concluded by the university and the enterprises or organization. In the present circumstances, employers consider students as potential employees and are interested in contributing to mastering the required professional competence.

With the introduction of professionally-oriented learning technologies, competencies are formed in the process of professional engagement and for the sake of the future profession.

To enhance WBL component in education it is important to create university practice-oriented platforms (incubators) that allow for the implementation of practice-oriented learning in the process of students performing real tasks in the learning profile being mastered with the participation of professionals commissioned by enterprises and organizations. UniLab aims to develop such a platform within WP5 that will be later operated by the Net of International Student Career Center.

ii. Belarus

Internship is a compulsory component of higher education in the Republic of Belarus. The internship is organized according to "Regulations on the practice of students, cadets, listeners" approved by decree of the Council of Ministers of the Republic of Belarus 03.06.2010 № 860. The

duration and content of internship depends on educational standards and curriculum of different specialties.

The main objectives of internship are mastering of practical skills and students' preparation for professional activity. The internship program includes tasks which students should complete during their internship (collecting, processing and analyzing information about the organization's activities, studying the technology and organization of production, participating in the organization's production and management activities, etc.).

Internship is divided into learning and industrial. Industrial internship includes internship in the specialty and undergraduate internship. The objectives of learning internship are the training of students' practical skills in the subjects studied, consolidation of theoretical knowledge, development of primary skills in the chosen specialty. This type of internship is organized within educational organizations or organizations whose activity corresponds to the chosen specialty. The duration of internship is usually about 2 weeks. The objectives of internship in the specialty are the acquisition of professional skills in the specialty, consolidation, expansion and systematization of knowledge obtained during the study of special educational disciplines. This internship is organized within organizations whose activity corresponds to the chosen specialty.

The duration of internship is usually about 4 weeks (1 month). The objectives of undergraduate internship are mastering and consolidating the knowledge and skills of students acquired in higher education institutions, checking the possibilities of work as a specialist, preparing materials for a graduation paper. This internship is organized within organizations whose activity corresponds to the chosen specialty. Students can perform some operations provided by official duties of respective position during the undergraduate practice. Students can also be hired for vacant positions in accordance with the law during the undergraduate practice. The duration of internship is usually about 4-10 weeks (1-2,5 months). The internship is organized on the base of a contract concluded with the organization.

The general management of the internship in the institution of higher education is usually carried out by the head of internship from the institution of higher education, while direct management is carried out by the supervisor from the department. The internship of students in the organization's departments is managed by an experienced employee of the organization, who is appointed by the order of the head of the organization. While undertaking the internship, the student reflects the progress of its implementation in the internship diary. The tutor provides a written assessment to the student in the diary of internship. At the end of the internship period, the student composes a report and gets a mark for it.

iii. Azerbaijan

Student internship in Azerbaijani Higher Education is regulated by the Decision of the cabinet of ministers of the Republic of Azerbaijan (By Resolution No. 221) dated September 19, 2008. According to this resolution (provision 1.2) student's work-based experience is an integral part of

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the relevant educational program. According to provision 1.3. of the same resolution "The organization, scope, purpose and duration of the internship are determined by the state educational standards in the relevant areas (specialties) where the training is carried out". State standards of Higher Education are developed by the Ministry of Education of the Republic of Azerbaijan.

All HEIs in Azerbaijan are using the same standards for their study programs, although private HEIs are more flexible with the design of their study programs. Student internships within the study programs are organized by universities during 3rd and 4th years of the study depending on the major. It is required by the same resolution that HEIs have agreements with companies to provide students with work-based internship. The main types of the Internship:

- Teaching Internship;
- Production (practical) Internship, including pre-diploma Internship.

Production (practical) Internship, as a rule, consists of vocational training and prediploma experience, and at the master's level - scientific research and scientific-pedagogical stages. Pre-diploma internship is the final stage of training and is carried out after the completion of all theoretical classes and other types of internships:

- to strengthen, deepen the theoretical knowledge acquired by the student in high (secondary special) school and to ensure its use in further labour activity;
- to acquaint students with new technologies, methods of work, scientific research and other issues, depending on the profile and nature of the specialty;
- to inculcate business, organizational and communicative skills in students;
- to improve students' knowledge in the field of computer technology;
- to strengthen the tendency and interest in the pedagogical profession among students studying in pedagogical specialties and to develop the ability to carry out educational work creatively.

Universities are required under the provision that Production (practical) internship is carried out on the basis of bilateral agreements concluded between educational institutions and manufacturing institutions. According to these agreements, regardless of ownership and organizational-legal form, enterprises must allocate internships for students of state and non-state higher (secondary special) educational institutions.

The review of Azerbaijani legislation reveals that the country's national legislation, in fact, provides legislative basis for successful student work-based internships. The main feature of the legislative base is that it provides universities with flexibility to organise student internships at the same time providing guidelines of how universities should build the cooperation with the industry to be successful in supporting student Internships.

D. Competence – methodology and survey results

Competence-based study programs are the key tool for the implementation of WBL university strategy. Due to this fact, competences need to be permanently revised and updated to meet the demands of the contemporary market and train professionals not for yesterday or today, but for tomorrow. One of the main functions of academia is to trace emerging demands of the labor market, be informed of the professions that are there to replace obsolete ones. The landscape of labor market is changing rapidly and universities should be ready to face the new reality created by the globalization, development of digital technologies, first and foremost by the artificial intellect. According to the Russian Analytical Agency RBC within the next 30 years labor market will be subjected to significant changes. The main trend will be manifested in soft skills – students will be expected to have well developed transversal skills (critical thinking, team work, resilience etc.) and trained in multidisciplinary areas.

UniLab highlights the importance of competence revision and update of the existing education programs at Bachelor and Master levels in compliance with demands of the labor market. The monitoring is performed by university research centers that communicate with companies that employ graduates to identify the gaps between the skills students get at university and the ones expected by the company. UniLab Partner Countries have conducted surveys of the labor market targeting at companies graduates are employed by of other companies falling into the main profiles of universities. The survey was made by the following institutions:

Russia	Financial University under the Government of the Russian Federation Siberian Federal University Orenburg State University Almetyevsk State Oil Institute
Belarus	Gomel State University named after F. Skorina Mogylyev State University named after A. Kuleshov
Azerbaijan	Khazar University Azerbaijani State University of Oil and Gas

Universities were using a unified approach and the common instruments to perform a survey:

(1) Survey of employers
(2) Analysis of job market vacancies

The survey covered the period from July 2020 to December 2021. UniLab Partner Countries institutions analyzed more than 16,000 advertisements.

The following leading Russian employer sites were used to search for vacancies: hh.ru, superJob.ru and avito.ru. Often employers indicate the following requirements for a candidate in their vacancies:

1) education level and professional experience;

2) job (professional) responsibilities;

3) List of necessary knowledge, skills and personal qualities.

Based on the content of the vacancy both professional requirements and personal qualities were selected. The results of the selection without repetition, but taking into account the frequency of mentioning were entered into the database for each training direction.

The purpose of the research of vacancies was to identify the most in-demand competencies that allow students and graduates of higher educational institutions to find a job successfully. To identify the list of competencies, it is necessary to identify:

- Current requests. The data obtained are more relevant, they allow you to quickly identify trends in the labor market,)
- Forward looking queries. The obtained data are not highly reliable, since they do not fully reflect the dynamics of the transformation of the labor market, caused by a complex of external and internal factors of its development. To identify queries, the following research options should be used:

The results obtained during the content analysis of vacancies were compared with the competencies of the educational program, which made it possible to identify current gaps in the preparation of both bachelors and masters.

Further on the received gaps were analyzed by experts for relevance and prospective demand. The experts were represented by education and labor market specialists (mid-level managers, exceptions: HR-HH). Sample size was at least 2 employees from key companies in the industry (at least 10 companies of various types and forms of ownership).

1. Survey of employers. Purpose: to compile a rating of current and promising future competencies necessary for solving labor problems and successful adaptation in the labor market. Research methods: 1) questionnaire / interview (See APPENDIX 1). Sample: heads of lily departments (exceptions: HR-HH),

2. Analysis of job market vacancies. Purpose: to compile a rating of relevant competencies necessary for solving labor problems and successful adaptation in the labor market. Research method: content analysis of current vacancies. Selection: announcement (vacancies) from open sources: hh.ru, superjob.ru, rabota.ru, from hand to hand, avito.ru, vkrabota.ru. Sample type: continuous for a period of at least 3 months.

Analysis categories: competencies demanded by the labor market in the relevant professions within the training areas "Economics (Finance)", "Management", "Advertising and Public Relations", "Applied Informatics", "Oil and Gas Business".

"Economics (Finance)" - financial analyst, financial consultant, banking specialist, lending specialist, etc.

"Management" - a project manager, a manager in an organization, a document management specialist, etc.

Advertising and Public Relations - PR-specialist, SMM-manager, advertising manager, etc.

"Applied Informatics" - IT specialist, specialist in applied informatics, technician-programmer, programmer-developer, system administrator / programmer, specialist in information systems, etc.

"Oil and Gas Business" - an engineer, oil geologist, technician, geological explorer, land surveyor, foreman, driller, laboratory assistant of structures, ecoanalyst, etc.

Units of analysis: a list of requirements for an employee, posted in the vacancy text (key skills, tasks, responsibilities, requirements, etc. (except for working conditions).

Units of Account: Frequency of Professional and Personal Competencies.

The complete and detailed analysis of each of the university can be found in the relevant annexes. Below you will find a complex and combined analysis of each of the 5 majors split into 3 regions: Russia, Belarus, Azerbaijan.

Russia

In accordance with the Russian legislation, the content of student training programs is determined by the following regulatory documents:

1. Federal State Educational Standards both for each field of study, such as "Management", "Economics", "Applied Informatics", "Advertising and Public Relations", etc., and for each level of training (bachelors, masters). FSES contain mandatory requirements, including the main competences that future graduates should have.
2. Professional standards (PS), developed by the labor market. PS contain the requirements for the employee (educational level, work experience) and the main characteristics of his/her activity (competences). PSs are developed for each individual type of professional activity (for example, programmer, human resources specialist, marketing specialist, etc.) and approved by the Ministry of Labor and Social Development of the Russian Federation.

Thus, when developing educational programs of study, the list of competencies necessary for students to obtain higher education is legislatively fixed.

We are going to exemplify the way competences are state in FSES in "Management" for bachelor and master programs.

Name of the group of professional competencies	Name of professional competencies of the direction	
	Bachelor Degree	**Master Degree**
Theoretical and methodological	Mastery of basic scientific concepts and categories of economics and management science and ability to apply them in solving professional problems	Ability to identify problems and trends in the modern economy and solve professional problems on the basis of knowledge (advanced level) of economic and management theory, as well as generalization and critical analysis of current management practices
	Ability to apply mathematical methods to solve standard professional problems, interpret mathematical results obtained	
Applied	Ability to apply forecasting tools, methods of planning and managerial decision-making, as well as to use methods of coordination and control of the organization	Ability to apply modern methods and techniques of data collection, processing and analysis, as well as determination and forecasting of basic socio-economic indicators of management objects
	Mastery of the basic theories of human resource management and organizational culture formation, as well as the principles of building compensation systems to solve management problems	Ability to assess the effectiveness and performance of the organization as a whole and individual projects, to develop evaluation techniques and the necessary indicators, taking into account risk factors and under conditions of uncertainty
	Mastering the basics of financial accounting and reporting, as well as the principles of management accounting in order to use accounting data to make management decisions	Ability to manage project and process activities in the organization, as well as to identify, evaluate and implement new market opportunities, manage material and financial flows, as well as all types of risks of economic systems
	Ability to apply basic financial management techniques to assess assets, working capital management, investment decisions, financing decisions	Ability to summarize and critically appraise scientific research in management and related fields, conduct research projects, and participate in the dissemination of economic and managerial knowledge

		(ПКН-5)
	Ability to identify and implement market opportunities, as well as possess the skills of business planning	Ability to manage strategic changes in the activities of the organization, to develop new areas of the organization and their corresponding business models organizations
Analytical	Possession of methods of strategic and marketing analysis of organizations (markets, products), development and implementation of organizational strategy, taking into account the needs and interests of various stakeholders	Ability to independently make sound organizational and managerial decisions, assess their operational and organizational effectiveness and social significance, to ensure their implementation
	Ability to analyze business processes and participate in project management, including innovation, organizational change and business process reengineering projects	Ability to analyze, identify, and effectively use human and social and intellectual capital, as well as the organization's accumulated knowledge, while applying the necessary leadership and communication skills
	Mastering of quantitative and qualitative information analysis and model building skills, using modern information technologies and software, including business analytics, data processing and analysis tools for analysis, modeling and decision support	
	Ability to analyze market and specific risks in solving organizational management problems	

Table 2. Excerpt from the Federal State Education Standards. Study program "Management"

As can be seen from the table, the formulation of competences in both bachelor and master programs has a generalized (broad) character, giving the university and the teacher a certain freedom in their actions and obtained outcomes. Moreover, for each program of study the university itself has the right to form additional professional competences in accordance with regional demands and labor market recommendations. However, each university chooses its

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own strategy of cooperation with the labor market, each creates its own approaches to the formation of education program content and quality assessment.

In contrast to the competences stated in FSES above the generic and subject-specific competences required by the labor market in the major "Management" differ mainly in transversal skills.

The survey of competences required by the labour market in Management has revealed the following gaps between the university study programs and labour market demands:

Employers' requirements	Competences Category
• Conducting negotiations, commercial proposal development. Services presentation, finalization and formatting transactions and deals. • Customer database development using CRM systems. • A full cycle of personnel recruitment to fill in various vacancies, personnel assessment, personnel pool formation. • Maintenance of a customer e-database • A full cycle of management (forecasting, planning, administration, coordination, motivation, controlling) • Efficient management of a managers' team, sharing responsibilities, training and motivation, creating incentives for growth and development, performance monitoring • Using methods and project work standards in order to improve project management efficiency • Acquiring start-up company building skills • Skills needed to examine risks, engage in crisis management, an ability to bring new life to business in the short term • Quantitative assessment of risks using special software (Deltek Acumen Risk / Primavera Risk Analysis / other).	**Bachelor programs** Generic Competencies • Systemic and creative thinking • Project development and implementation, teamwork and leadership • Communication skills, intercultural communication skills • Self-organization and individual development (incl. own health condition monitoring), emergency management • Inclusive competences. Economic culture, incl. financial literacy. A civil stance. Subject-specific Competences • Ability to solve problems in a professional environment using knowledge of economic theory, theory of management and theory of administration; • Ability to gather, process and analyze data needed to solve managerial problems; • Ability to develop informed managerial solutions, facilitate the problem-solving process and assess the consequences of actions; • Ability to develop business plans in order to open new business sectors and establish new organizations; • Ability to use ICT, incl. Big Data management and data mining.

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• Development of methodology and regulations in order to build a risk management system and risk management principles within a certain business process and business sector	**Master programs** • General Professional Competences • Ability to solve problems in a professional environment using the knowledge acquired (on an advanced level) • Ability to use modern data gathering methods and techniques, advanced methods of their processing and analysis • Ability to independently make informed managerial decisions, assess their operational and administrative efficiency and social value • Ability to manage projects and business processes • Ability to summarize data and critically assess research findings
Gap Analysis	
Bachelor programs • Strategic planning, product sales plan development and implementation; monitoring performance related to commodity circulation • Skills needed for B2C/ B2B sales • Development of legal norms and regulations	
Master programs • Budget management • Big team management • Innovation management	

Table 3. Competences Gap Analysis Results: Management

Below you will find survey results featuring competences gaps in the major "Applied informatics":

Competence	Frequency
Flawless command of Russian language;	19
Preparation of materials for posting on the Internet on various topics in the B2C sector	18
Business communication skills and interpersonal skills	17
Development and implementation of brand promotion strategy, BTL-activities.	17
Project budgeting, leading and reporting	17
Knowledge of the market of suppliers and contractors for events and preparation of various aspects of events	14
Ability to work in a team	13

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Orientation in the latest trends	13
Ability to work under tight deadlines.	12
Execution, responsibility, accuracy and punctuality.	12
Technical competence in building diverse venues (exhibitions)	12
Organization of promotional video and photo shoots for restaurants, including control of closing documents.	12
Ability to work with graphics and video materials, including their creation (staging the shooting of interviews or graphic design of materials).	11
Ability to organize press conferences.	11
Possession and ability to draw up a Media Plan.	11
English (from Upper-Intermediate level);	11
Experience in leading event projects, mice-projects (event-marketing) in leading event or BTL agencies.	11
Responsible for agreed "brand health" metrics (brand P&L, brand representation, knowledge level, etc.)	11
Setting operational goals for trade marketing and communications managers within entrusted brands	11
Representing the organization as a press officer.	11
Sammaring the books and assisting with video footage of them in the studio;	11
Creating client presentations and internal presentations for the company;	11
Analyzing emerging trends in education	10

Table 4. Excerpt from the database of graduates' skills demanded among employers in the field of "Applied Informatics".

Further, for each training area all the requirements of employers were correlated with the currently implemented competencies reflected in the training programs. In this way we managed not only to identify the skills demanded by the labor market, but also to determine the list of skills that have not yet been fixed in the form of competencies in our training programs.

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<table>
<tr><th>Employers' requirements</th><th colspan="2">Competences Category</th></tr>
<tr><td rowspan="3">• Understanding of the basics of programming, design, development of software, archiving and document management.
• Knowledge of the state standards (GOST) related to the basic operations with database management systems and IDEF and BPMN notation.
• Ability to formalize business processes, audit them and optimize them taking the modern automation techniques into account.
• Handle finalized work statements and prepare work statements describing the system optimization requirements.
• Setting software development/optimization goals.
• Participation in developed software testing. Coordinating efforts when developing solutions in cooperation with the customers and the technology architect. Developed software presentation to the customer;
• Ability to use the Big Data stack tools, incl. Apache Airflow, Apache Flink, ClickHouse, Redis, GridGain, Apache Ignite, Tarantool, SyslogNG, WinlogBeat, ELK stack (Elasticsearch, Logstash,</td><td colspan="2">Bachelor programs</td></tr>
<tr><td>• Systemic and critical thinking
• Project development and implementation
• Team work and leadership
• Communication skills</td><td>• General Professional Competencies
• Apply knowledge of natural sciences and general engineering, mathematical analysis and modeling methodology, theoretical and experiment-based research to practice;
• Use modern information technology and software;
• Solve standard problems in a professional environment;
• Participate in standards, policies and regulations development;
• Install and mount hardware and software;
• Examine and develop administrative, technological and economic processes;
• Develop algorithms and software;
• Participate in project management;
• Participate in the communication process in a professional environment.</td></tr>
<tr><td colspan="2">Master programs</td></tr>
<tr><td>• Communication skills
• Intercultural communication
• Self-organization and individual development
• Emergency</td><td>• General Professional Competencies
• Independently acquire, expand and use knowledge of mathematics, natural sciences, social sciences, economics and other professional knowledge in</td></tr>
</table>

Kibana), Cloudera (Hadoop, Kafka, Spark). • Ability to use web applications (HTTP, TCP/IP, HTML/CSS, JS, JSON, web-based services, SQL). • Knowledge of the Russian IT law, by-laws that regulate operations in the information security sector. • Well-developed analytical skills. • Systemic thinking. • English language skills (oral and written English) (at least B2 or higher).	management	non-standard problem solving; • Develop own algorithms and software, incl. using modern smart technologies, in order to solve problems in a professional environment. • Examine data related to the profession, highlight the key points, structure it, format it, and present it as analytical surveys; • Apply scientific principles and research methods to practice; • Develop and modernize software and hardware used in information and automation systems; • Examine current issues and methods used in applied computer science and information society development issues; • Use research methods and mathematical modelling methods related to information system design and management; • Efficiently manage the process of software development and project development.
Gap Analysis		
• Operations with neural networks using Tensorflow/PyTorch. • Knowledge of telecommunications protocols or radio communication protocols • Developing graph and sequence partition methodology based on the use of a tensor microprocessor. • Operations with neural network compilers/optimizers (XLA, TVM). • Configuration and support of cash register equipment/acquiring equipment/network		

equipment on remote points of sales • Maintenance of the local area network and the relevant equipment. • Equipment commissioning and start-up, incl. data transmission networks, video surveillance networks, server equipment. • Software debugging in cooperation with the microcontroller system developer

Table 5. Competencies Gap Analysis Results: Applied Informatics

Thus, within the framework of training in the direction "Applied Informatics" 12 relevant and demanded by the labor market competences, which in one or another degree are implemented by the program, were identified. At the same time, 8 competencies were identified, which are not disclosed in the baccalaureate and master degree programs, but are in demand among employers.

In Public Relations and Advertising major the survey revealed the following gaps in competences:

Employers' Requirements	**Competences Category**
• Development and implementation of a corporate information strategy aimed at shaping a positive corporate brand and image and attracting new customers • Skills of engagement, organizing and managing PR events, incl. exhibitions, seminars, event-based projects and MICE projects • SMM skills, social media work skills • Analysis of the demand and day-to-day management of POS and advertising material production and distribution • Text production, advertising and other text production, incl. oral presentations • Graphic material handling skills, video recording production (incl. Adobe software) • Correct speech, a rich vocabulary, communication skills, ability to work as member of a team, business communication skills • English language skills (Intermediate level and higher)	**Bachelor programs** Generic Competencies • Team work and leadership • Communication skills • Intercultural communication • Self-organization and individual development • Emergency management Subject-specific Competencies • Product producing in a professional activity • Society, the state, culture and audience • Media communication system • Technologies • Effects **Master programs** • Open data analysis • PR and GR project implementation • Ability to influence public opinion

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Gap Analysis
Bachelor programs • Behavioural models and gamification • Moderating, facilitation and mediation • Design • Work automation • No-code software development
Master programs • Business model development • Managers' documents • Project documentation • Efficiency assessment • Content and event planning • Text editing • Data visualization • Copyright and intellectual property rights legalization

Table 6. Competences Gap Analysis Results: Advertising and PR

Thus, the training in the direction of "Advertising and PR" revealed that the number of clarifications is similar to previous ones, but most of them are already being implemented. At the same time, the study allowed to identify new requirements for young employees from the labor market.

Almetyevsk State Oil Institute (ASOI) made a research in the oil and gas industry.

At the first stage of the research the expert survey among employers was conducted. The survey covered 17 oil and gas companies took part in the survey, including 11 companies belonging to the Tatneft Group, 3 divisions of the TagraS Holding, Mirriko Group of Companies, Almetyevsk District Oil Pipeline Administration of the Transneft-Prikamye Joint Stock Company, and Sheshmaoil Management Company LLC.

11 respondents (64.7%) assessed the general level of professional training of ASOI graduates as high, 3 people (17.6%) as average and 3 (17.6%) found it difficult to answer.

To the question "What skills, indirectly related to professional activities, should a specialist in your organization have?" 16 people (94.1%) highlighted knowledge of the basic programs Excel, Project, Power Point, 14 respondents (82.4%) - the ability to prioritize work, 13 people (76.5%) answered to be able to organize their time, communicate in team, have business writing skills. 12 (70.9%), 10 (58.8%) and 7 (41.8%) respondents, respectively, singled out having presentation skills, possessing business negotiation skills and being able to smooth out conflicts in a team. Skills such as flexible thinking, financial literacy, blind typing, foreign language skills, interviewing skills, quick reading techniques, and willingness to travel on business scored from 1 to 4 votes.

To the question "What skills directly related to professional activity should a specialist in your organization have?" 100% of the respondents answered "to draw up reports, conclusions, recommendations", 15 people (88.2%) to work with documentation, to maintain document flow.

For 14 (82.4%) people chose the skills - to be an advanced user of specialized programs (1C, etc.), to be able to plan their working hours and make operational decisions. Skills: assess risks, know legislative and regulatory documents, draw up business plans, organize meetings, presentations were chosen by 12 (70.6%), 11 (64.7%) and 10 (58.8%) people, respectively. 9 (52.9%) respondents answered - to work with contractual relations, to develop and describe the scheme of business processes. The rest of the proposed skills received from 1 to 8 votes, which is less than 47%.

Evaluating the quality of training of graduates of ASOI, the majority of respondents, from 9 to 12 people, highlighted a high level of education, theoretical knowledge in the profile of the specialty, moral qualities, the ability to quickly master the necessary skills, desire for learning new things, the ability to focus on the main thing. The average level of practical training skills in the profile of the specialty received, awareness in related fields, computer skills were assessed by 11 and 10 respondents, respectively.

To the question "We ask you to evaluate the personal qualities of the ASOI graduates as young specialists" from 13 to 10 respondents answered a high degree of such qualities as ambition, ethical behavior, teamwork, striving to develop professionally and personally, communication skills, result orientation. 9 people determined the average level of quick learning, flexibility in relations with people and analytical skills.

During their work in the organization, ASOI graduates show the following professional qualities: efficiency - 13 answers (76.5%), initiative and professionalism in 10 answers (58.8%), honesty and susceptibility to innovations in 9 answers (52.9%), ability to make independent decisions, organizational skills, intelligence and goodwill, 8 answers each (47.1%). Such qualities as appeal to foreign experience and selfishness were not noted by a single respondent.

To the question "What does not match you or your colleagues' expectations about ASOI graduates?" the most common answer is "High salary expectations" - 10 respondents, which is 62.5%. 5 people (31.3%) answered - high social demands. The rest of the responses received less than 4 votes.

To improve the professional training of students and increase its prestige in the labor market, about 1 respondent (5.9%) gave the following suggestions: increasing the level of real practical work, strengthening professional knowledge and skills of their application in practice, developing skills to work with specialized programs, increasing knowledge of project and process management. 8 respondents (47.1%) believe that everything is fine as it is and offered no proposals.

To the question "What are the first points you pay attention to when hiring a young specialist?" 14 respondents (82.4%) answered "specialty name", 11 (64.7%) highlighted the presence of work experience and the names of the companies, candidate worked for, 11 (64.7%) highlighted personal qualities, 10 (58.8%) ability to quickly adapt in a team, 8 (47.1%) presence of industrial practice, grades in the diploma, active participation in scientific events.

The last question listed the following professional and personal competencies that will be in demand in the 21st century:

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- IT competencies
- knowledge of the requirements of labor protection, industrial and environmental safety
- communication skills, the ability to work in a team
- multifunctionality, the ability to quickly rebuild to meet the goals
- creativity and out-of-the-box thinking

At the second stage os research a comparative analysis was conducted. An analysis of a survey of employers' satisfaction with the training of students at the Almetyevsk State Oil Institute showed a high level of preparedness of graduates who, in general, possess the required theoretical knowledge and practical skills, possess necessary moral and personal qualities, are able to work in a team and take initiative. At the same time, they often have high salary expectations and high social demands, which can negatively affect employment and adaptation at the first job.

The study of the professional and personal competencies of bachelors and undergraduates of ASOI showed that it is necessary to strengthen the work on the formation of IT skills, knowledge of specialized programs and cybersecurity. This is due to general digitalization and robotization, including production and industrial enterprises.

The survey and empirical analysis of the data showed that the development of training programs is a permanent process, requiring from the university an operational mechanism, the adjustment of training programs.

Belarus

Two Belorussian higher education institutions – Gomel State university names after F. Skirina and Mogylyev State University named after A. Kuleshov conducted a survey using the same methodology as describes above to reach the outcomes as stated below.

According to the labor marker response graduates do not have a sufficiently high level of competencies in the field of:

- language training (knowledge of English, Chinese at a professional level);
- in the field of financial and economic literacy (writing startups and their promotion, etc.);
- psychological readiness for the conditions of future professional activity: low level of stress resistance, ability to manage one's psycho-emotional states, organization of the daily routine and time management, effective communication and teamwork skills, etc.
- awareness in related areas of the received specialty;
- time management;
- office work;
- operational decision-making;
- in the field of legislative literacy;

Those gaps between the trained competences and expected skills are caused by the following factors:

- discrepancy between the expected and proposed conditions of graduates' labor activity (work place, work schedule, social package of services, etc.) and the quality of life (infrastructure, housing, places for recreation.);

- discrepancy between the characteristics of new jobs and the professional competencies of graduates and their expectations, including those cases where the professional competencies of innovative personnel significantly exceed the requirements for the proposed jobs;
- lack of optimal conditions for labor activity (workplace, work schedule, social package of services, etc.) and quality of life (infrastructure, housing, places for recreation);
- the needs of employers change in relation to the professional competencies of students as a result of the creation of new jobs and may remain unsatisfied for a long time;
- professional competencies of students (for example, knowledge of a foreign language, modern IT, digital platforms, etc.) either do not meet the changed requirements for new jobs, or the employer has these requirements too high;

Currently, in the curricula of almost all specialties of the first stage (bachelor's degree) of GSU. F. Practice scores are planned for each course starting from the 1st course.

For example, in the specialty "Social work (social-psychological activity)" the following practices are carried out: 1st course - educational (volunteer) - (2 weeks); 2nd year - educational introductory in institutions of social protection (4 weeks); 3 course - industrial socio-psychological (4 weeks); 4 course - pre-diploma (10 weeks). The specialty "Social Pedagogy" provides for the following types of practices: 1st course - educational familiarization (1 week); 2 course - educational first socio-pedagogical (3 weeks); 3 course - educational second socio-pedagogical (3 weeks); pedagogical practice in educational and recreational educational institutions (3 weeks); 4 course - pedagogical (4 weeks); pre-diploma (4 weeks).

As a rule, many students of these specialties are employed in their specialty in the 4th year, studying according to an individual schedule, then after graduation they are assigned to work in the same institutions.

The University has created and operates 93 branches of the departments, including 65 branches of the departments of pedagogical orientation. The bases for branches, including 56 educational institutions of the city of Gomel and the Gomel region. Practical and laboratory classes in a number of disciplines are conducted on the basis of department branches using the facilities and equipment of institutions.

Students from the 1st year are involved in volunteer activities (of a social and pedagogical nature), carried out, including on the basis of educational institutions.

New practice programs have been developed in accordance with modern requirements.

The University is constantly working to improve the practical training of graduates. In 2021, the optional "Pedagogical Workshop" continued, which was introduced into the curricula of a number of pedagogical specialties in order to improve the practical training of graduates from the 2018-2019 academic year. The volume of the elective: 36 hours (lectures - 2 hours, practical - 10 hours, laboratory 24 hours, with 14 hours distributed to university teachers, 10 - to school teachers). The pedagogical workshop as an academic discipline is designed to help students master the basics of practice-oriented pedagogical activity, since it is not considered as an

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addition to theoretical courses in pedagogy and psychology, but as the basis for presenting the future professional activity of a teacher, preparing students for active teaching practice.

As a result of passing this discipline, students got acquainted with the general issues of organizing pedagogical practice; maintaining documentation; with the principles and features of the organization of the learning process in institutions of general secondary education; methods of conducting lessons; prepared a diary of practice, analyzes of lessons. Based on the results of the pedagogical workshop, the faculties noted that such a discipline in practice-oriented learning is in great demand, since students earlier see the school as an object and the lesson as the subject of their future profession; students get a better idea of their future practice.

The content of psychological and pedagogical disciplines and disciplines of the social and humanitarian block has been updated in accordance with professional and educational standards based on an activity approach, incl. used modern approaches described and tested in foreign countries.

The forms, methods, technologies of the educational process are regularly modernized based on the strategies of problem-based research, active, collective learning.

On the basis of GSU, master programs are regularly held for students by the best subject teachers of the region, participants and laureates of the district, city and regional stages of the "Teacher of the Year" competition. The best subject teachers are involved in guiding the teaching practice of students, reviewing theses. Within the framework of the common information space of the educational, scientific and innovative cluster, network interaction is carried out with the institutions participating in the cluster (lectures, seminars, internships).

On an ongoing basis, a study was carried out of the prospective needs for teaching staff of different educational levels in the context of specialties.

Mogylyev State University named after A. Kuleshov conducted a survey within the main employers in the field of Management.

Employers' requirements	Gaps	Competences
• higher professional education as the main one, the presence of technical education (as an additional one) is welcomed; • independent development of business plans for investment projects; • calculation of	• Development of business plans for investment projects • Knowledge of the basics of labor law, • Knowledge and understanding of management	Academic Competencies: • Be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems. • Be proficient in systemic and comparative analysis. • Possess research skills. • Be able to work independently. • Be able to generate new ideas (be creative). • To have an interdisciplinary approach to problem solving. • Have skills related to the use of technical devices, information management and

payback in feasibility studies of investment projects; • knowledge of the basics of budgeting, knowledge of financial analysis and accounting, primary documentation, • knowledge of the basics of labor and tax legislation, • Knowledge and understanding of management accounting principles; • Knowledge of accounting principles; • Experienced user of PC, office programs, Excel, Word, PowerPoint, Internet, mail programs; • ability to visually present data, to work freely with presentations in PowerPoint; • knowledge of the program 1C: Enterprise 8; • Knowledge of English (fluency, translation and	accounting principles; • Knowledge of the program 1C: Enterprise	computer work. • Possess oral and written communication skills. • Be able to learn, improve their skills throughout their lives. Social and personal competencies: • Possess the qualities of citizenship. • Be capable of social interaction. • Possess the ability for interpersonal communication. • Learn health care skills. • Be capable of criticism and self-criticism. • Be able to work in a team. • Professional competencies: • To ensure the sustainable development of the main production and functional divisions of the organization (enterprise). • Be proficient in modern management decision-making techniques. • Monitor the fulfillment of tasks, technological processes, production culture, labor, financial and technological discipline. • To carry out organizational preparation of production, as well as setting innovative managerial and economic tasks. • Provide economic justification for design and technological preparation of production • Conduct business meetings and negotiations, correspondence with foreign partners, prepare orders, draft orders, action plans and contracts; • Provide staff development. • Organize the modernization and production of new types of products. • Develop long-term, medium-term and current plans for the economic and social development of the organization (enterprise) and its structural divisions. • Carry out a comprehensive economic

communication without a dictionary) with confirmation of training, knowledge of several foreign languages is welcome; • A minimum of three years' work experience in the relevant field is preferred • stress resistance, multitasking, self-discipline, communication skills, logical thinking and analytical skills. • active life position, responsibility, accuracy, attentiveness, focus on results, desire for self-learning, diligence, punctuality. • ability to prioritize independently; • ability to work with a large amount of information: analyze, draw conclusions and prepare recommendations, automate the calculation of		analysis of all types of activities of the organization (enterprise) and develop measures for the efficient use of resources, production capacities in order to increase the efficiency of production and economic activities. • Prepare data for periodic reporting within the terms and in the forms established by the state bodies of statistics and analysis. • Drafting planned cost estimates for products (works, services), their structural elements, cost estimates for various types of activities of the organization (enterprise) as well as planned and estimated prices for products and services of structural divisions. • Develop cost standards for the main types of raw materials, materials, fuel, energy consumed in production. • Determine the competitiveness of goods, services, works and organizations (enterprises) as a whole. • To systematize statistical materials on labor, characterizing the quantitative and qualitative indicators of the activity of the organization (enterprise) and its divisions. • To study the results of the work of the organization (enterprise) and its structural divisions and compare them with the indicators of other organizations (enterprises). • Identify on-farm reserves and develop measures for their use. • Carry out an operational economic analysis of the implementation of planned targets and measures to use reserves to increase the efficiency of production and economic activities. • Possess the skills of conducting individual stages of the production and economic

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indicators using available software, • Serious attitude to business, ability for self-development and desire to join a professional team.		activities of an organization (enterprise), including: research and development, production, marketing, formation and use of resources, promotion of goods. • Be able to make informed decisions in the face of business uncertainty. • Develop operational schedules for the development of new products and monitor their implementation. • Use economic laws and patterns in the management of modern labor economics • Conduct research in the field of methodology and methods of planning, labor indicators and analysis of the results of the production and economic activities of the organization (enterprise) and its structural divisions. • Substantiate the system of indicators and methods for assessing the economic efficiency of the functioning of an organization (enterprise), certain types of activities and structural divisions. • Search, systematize and analyze information on the prospects for the development of the industry, innovative technologies, projects and solutions. • Work with scientific, technical and patent literature. • Assess the competitiveness and economic efficiency of developed technologies.

Table 7. Gaps analysis in Management

When studying the requirements of employers, the following inconsistencies were identified:

- development of business plans for investment projects
- knowledge of the basics of labor law,
- knowledge and understanding of the principles of management accounting;
- knowledge of the program 1C: Enterprise 8

The reasons for the discrepancy are related to the absence in the curriculum of the specialty of disciplines that provide for the development of these competencies, or to the fact that the curricula for disciplines do not pay enough attention to these competencies. So, within the

framework of the discipline "Accounting" it is possible to introduce laboratory classes using the software "1C: Enterprise", within the framework of the discipline "Fundamentals of Law" to expand the sections related to labor legislation. It is also possible to supplement the curriculum with the disciplines "Business Planning" and "Management Accounting".

Azerbaijan

In accordance with legislation of the Republic of Azerbaijan, the content of education plan in the field of higher education at Azerbaijan State Oil and İndustry University is determined by the following regulatory documents:

1. Regulatory documents of the Ministry of Education of the Republic of Azerbaijan.
2. Charter of ASOİU.
3. İnstitutional educational standards both for each area of education, for example, "Applied Informatics", "Oil and Gas Engineering", etc., and for each level of training (bachelor and master degree). The institutional educational standarts provide mandatory requirements, including the basic competencies that future graduates must possess.
4. Professional standards (PS) developed by the labor market. PS contain requirements for the employee (level of education, work experience) and the main characteristics of his activities (competencies). PS are developed for each individual type of professional activity (for example, a programmer, an oil and gas engineer, etc.) and is approved by the Ministry of Labor and Social Protection of Population of the Republic of Azerbaijan.

Khazar University's teaching objectives in terms of Management and Marketing specialties. Those departments' course syllabuses are prepared based on the requirement of the market. Departments prepare course materials based on state standards. The undergraduate study includes 240 credits (180 credits based on state standards; 60 credits prepared independently). State standards include major competencies that universities should provide to the students in Azerbaijan. Standards exactly include the skills that should be developed in the universities. When it comes to monitoring the quality of course credits, the quality assurance department follows the process in the university. Quality Assurance Staff monitor whether syllabuses and curricula meet the standards or not.

Skills that are taught in Management specialty:

Strategic planning, marketing research, advertising, promotion and sales, financial planning, and financing; operations and services planning; human resource planning and management; analysis of risk; information management strategy; legal aspects of new venture planning; and global venturing; leadership, communication; descriptive and numerical; problem-solving; effective negotiation and conflict management; decision making; project management,

Skills that are taught in Marketing specialty:

Research and inquiry skills; data collection; data analysis; strategic thinking, cultivating global marketing. Within these skills, students cultivate the mindset and strategic thinking about marketing. This specialty enhances students' abilities to adapt and utilize marketing strategies to specific market environments.

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The above-mentioned skills of both management and marketing specialties are taught within different activities through a term. Those activities are group projects, presentations, assignments, class reflections, and discussions.

This gap analysis was prepared based on the employer satisfaction survey. The survey includes questions to learn employment satisfaction and expectations of employers from graduates. Survey has been filled out by fourteen industry partners of Khazar University. Many Khazar University graduates work in these fourteen business enterprises. Mostly, HR specialists and recruiters participated in the survey. They represent banking, telecommunication, audit, consulting sectors, and other sectors. Professional qualities such as professionalism, organizational, initiative skills are mostly required by the industry from the graduate of Khazar University. More than 50 percent of the respondents answered that they pay attention to personality, adaptability, availability of industrial practice and internship, and availability of work experience. Interestingly, companies pay attention to grates in the graduates' transcripts. When specific proposals have been asked for improvement, company 64 percent of representatives answered that they do not have any offer for the university. In the survey, respondents have been asked about personal and professional competencies that will be demanded in the 21st of the century. Agility, creative thinking, data analysis, critical thinking, and problem-solving.

When developing educational training programs Azerbaijan State Oil and Industry University, the list of competencies necessary for students to receive higher education is legally fixed. An example of a list of professional competencies in the specialization of ""Oil and Gas Engineering" in accordance with the İnstitutional educational standards for bachelors and masters:

Title of the professional competencies set	Title of the professional competences specialization	
	Bachelor level	Master level
Theoretical and methodological	Possession of oral and written communication skills in the Azerbaijani language in the specialty; basic scientific concepts and categories of oil and gas engineering science and the ability to apply them in solving professional problems	- Teamwork, the ability to achieve a common approach to solving the problem; - The ability to adapt to new conditions, to take the initiative and the will to succeed; - Ability to identify and select additional information resources to solve problems; - Analyze, summarize and apply relevant information for professional purposes -Ability to plan and organize professional activities, improve future education and existing skills, manage time and complete assignments on time; - Social and environmental responsibility
	Communication skills in at least one foreign language in the specialty; - Systematic and comprehensive knowledge of the historical, legal, political, cultural, ideological foundations of the Azerbaijani	

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	statehood and its place and role in the modern world, the ability to predict the future development of our national state; - Ability to identify threats and challenges facing our nation-state; - ability to use information technology in the workplace;	in its activities, as well as civic awareness and ethical approach, as well as the ability to prioritize quality: - Ability to re-evaluate the situation and self-criticism in order to develop their knowledge and skills; - Ability to use the basic laws of natural sciences, mathematical methods and modeling in research activities in professional activities.
Applied	Ability to apply mathematical rules and laws, use existing methods and apply mathematical methods to process results, use mathematical models in the natural sciences, simple systems and processes, and / or critically analyze experimental data, taking into account sources of error and uncertainty be able to make, use, interpret and present, perform analytical and numerical cases of basic equations of mathematics;	be able to ensure compliance with the requirements for sea pollution; - be able to prevent oil, gas and water manifestations; - as one of the important sections of oil and gas well drilling technology, know the history of drilling, modern well drilling methods, classification of drilling equipment, rotor drilling technological schemes, inclined wells, information on well reinforcement, final well work, pipe testing, safety;
	Ability to apply knowledge of types, physical and chemical properties and organic molecular theory of organic substances in oil and gas engineering; - Ability to know the structure of the oil and gas field and be able to determine its appearance on the map;	- be able to strengthen the tendency and interest in the specialty and creatively implement innovative projects; - be able to describe practical issues in a way that can be solved by formal methods; - be able to apply the theoretical knowledge acquired in the teaching process in solving practical problems; - be able to drill wells and perform work;
	know the stratigraphy of oil and gas horizons, the composition of rocks, the scheme of oil and gas accumulation, be able to clean the separator; - be able to write and read reports and technical documents;	be able to complete the wells after drilling, ie to lower the protective pipes, information on the working conditions of the protective pipes, buffer solutions, their filling with cement mortar, test the protective pipes after the formation of cement stone, and finally perforation;

	- must be able to safely queue in the brigade working with drilling equipment; - must be able to use the interlocking communication system;	- be able to follow safety rules when changing the regulator in a working well; - know the role of the rapper during perforation; - during the combustion of oil and oil products, the fire must be able to use the most effective fire extinguishers; - know the issue of selecting the optimal mode in gas-lift wells and be able to apply if necessary; - be able to use rescue equipment; - be able to use first aid in the drill;
	- be able to operate the main equipment and auxiliary mechanisms, as well as related control systems; - be able to take measures to prevent environmental pollution when working with detergents and cement solutions, lubricants;	must be able to install and operate equipment, evaluate heat and maintain it safely: - be able to troubleshoot control and measuring devices (NOC) and equipment and bring them to working condition; - be able to safely perform maintenance and repairs, identify the causes of malfunctions of mechanisms and eliminate faults;
	- be able to use drilling equipment and tools, cementing, pumping systems; - be able to use hand tools, machines and measuring tools in the manufacture of parts and repair of equipment; - must know the safety rules when navigating by sea;	- be able to operate wells on deep seabed; - know the maximum unloading depth of pump-compressor pipes of different brands and diameters in fountain-gas lift wells; - know when to use needle nozzles;
Analitical	in case of increase in the amount of water in the well product, be able to apply the necessary methods for the isolation of the water after its analysis in the laboratory;	know the research methods to determine the condition of the well bottom zone, ways to create flow regimes from the well to the well, be able to master the wells that are put into operation without drilling;
	- have a thorough knowledge of the rules for the use of chemical reagents and the ability to	- know the reasons for gas accumulation in the pipeline space during the operation of wells by the fountain

	organize the observance of safety rules by both himself and the staff;	method; - be able to calculate the efficiency of the hoist; - be able to regulate the operation of compressor wells;
	- have a deep knowledge of methods of combating asphalt-resin-paraffin deposits; - be able to provide safety, manage and maintain automatic and machine drill switches;	
	- be able to make informed decisions in the management of oil and gas production processes.	

Table 8. Gaps analysis in Oil and Gas.

As can be seen from the table, the formulation of competencies as in the bachelor's degree, as well as in the master's degree has a general (broad) character, providing the university and the teacher with a certain freedom in their achievement. Moreover, for each training program of the university it is necessary to form additional professional competencies in accordance with the regional inquiries and recommendations of the labor market. However, each university chooses its strategy of cooperation with the labor market, each creates its own approach to the formation of training content and evaluation of the quality of training.

With the aim of improving education and identifying the required labor market competencies are organized and conducted empirical research. For the period from September 2020 to December 2021, more than 16,000 job advertisements were analyzed in 2 areas of training:

1) Oil and gas engineering
2) Applied Informatics

To search for vacancies, the following leading Azerbaijani websites of employers were used: https://jobsearch.az/, https://ejob.az/ and https://edumap.az/category/vakansiyalar/. In the current vacancies, the employer indicates the following requirements for the candidate:

1) level of education and professional experience;
2) labor (professional) duties;
3) a list of necessary knowledge, skills and personal qualities.

Based on the content of the vacancy, they were selected as professional requirements, as well as personal qualities. The results of the selection are unique, but with the frequency of mentions in the database of each direction of training.

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Title	Frequency
Azerbaijan as native language;	20
Higher education in the field of Oil and Gas Enginnering	20
Business communication skills	17
To be fluent in AutoCAD	17
Must be fluent in MS Office programs	17
To be familiar with oilfield equipment	16
Ability to work in a team	14
Must know how to prepare technological documents	14
Ability to work under tight deadlines.	14
Diligence, responsibility, accuracy and punctuality.	15
Knowledge of standards in the oil and gas industry	13
Management and decision-making skills	16
Work experience more than 3 years	16
Must be careful, accurate in his work	11
Organizational skills	11
Development of oilfield equipment drawings	17
Monitoring the turnover of products in the warehouse;	16
Preparation of technical reports;	15
Development of technological documents for the production of oilfield equipment:	16

Table 9. Fragment of the database of required skills of graduates of the specialization of "Oil and Gas Engineering"

Further, for each area of training, all the requirements of employers were correlated with the currently implemented competencies reflected in the training programs. Thus, it was possible not only to identify the skills that are in demand on the labor market, but also to determine the list of skills that have not yet been fixed in the form of competencies in our training programs.

Employers' requirements	**Competences Category**
• Azerbaijan as native language;	**Bachelor programs**

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• Higher education in the field of Oil and Gas Engineering • Business communication skills • To be fluent in AutoCAD • Must be fluent in MS Office programs • To be familiar with oilfield equipment • Ability to work in a team • Must know how to prepare technological documents • Ability to work under tight deadlines. • Diligence, responsibility, accuracy and punctuality. • Knowledge of standards in the oil and gas industry • Management and decision-making skills • Work experience more than 3 years	• Team work and leadership • Communication skills • Systemic and critical thinking • Management and decision-making skills	•General Professional Competencies •Apply knowledge of general oil and gas engineering, analytical analysis, theoretical and experiment-based research to practice; •Use modern information technology; •Solve standard problems in a professional environment; •To apply the theoretical knowledge acquired in the teaching process in solving practical problems; •To drill wells and perform work;; •be able to operate wells on deep seabed;; •Participate in the communication process in a professional environment.
• Must be careful, accurate in his work • Organizational skills • Development of oilfield equipment drawings • Monitoring the turnover of products in the warehouse; • Preparation of technical reports; • Development of technological documents for the production of oilfield equipment:	**Master programs**	
	• Communication skills • Intercultural communication • Self-organization and individual development • Emergency management	• General Professional Competencies • Independently acquire, expand and use knowledge of oil and gas engineering field and other professional knowledge in non-standard problem solving; • To be able to plan and organize professional activities, improve future education and existing skills, manage time and complete assignments on time. • To be able to troubleshoot control and measuring devices (NOC) and equipment and bring them to working condition • Apply scientific principles and

		research methods to practice; • To be able to safely perform maintenance and repairs, identify the causes of malfunctions of mechanisms and eliminate faults;
Gaps		
1. Not meeting the requirement for minimum work experience 2. Knowing additional foreign language at the required level 3. Knowledge of the modern equipment techniques 4. Developing graph and sequence partition methodology based on the use of a tensor microprocessor. 5. Lack of training and development staff use the matrix to assess proficiency 6. Lack of curricula to fill gaps and verify training effectiveness 7. Lack of activities to define job functions and to understand its business and technical needs 8. Employee's software proficiency no aligned with domain experience 9. Hands-on courses using software critical are not provided to the company. 10. Benchmark for skill with recommended software, organized by workflow and discipline are not promoted		

Table 10. Competencies Gap Analysis Results: Oil and Gas Engineering

Employers' requirements	Competences Category
• Understanding of the basics of	**Bachelor programs**

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programming, design, development of software, archiving and document management. • Sound understanding of computer systems (hardware/software), networks etc. • Experience in analysis, implementation and evaluation of IT systems and their specifications. • Experience in project management. • Excellent leadership and decision-making skills. • Strategic thinking. • Experience in controlling information technology budget. • Fluency in English, Azerbaijani, and Russian languages. • Excellent written and verbal communication skills. • Strong interpersonal skills and ability to effectively communicate with teams across the entire organization. • Must have the ability to maintain confidentiality and work well with others. • Excellent organizational and leadership skills • High level of attention to details.	• Systemic and critical thinking • Project development and implementation • Team work and leadership • Communication skills	• Oral and written communication skills in the Azerbaijani language by specialty; Communication skills in at least one foreign language by specialty, • ability to use information technology in the workplace; - Teamwork, the ability to achieve a common approach to solving a problem; • • The ability to adapt to new conditions, to take the initiative and the will to succeed; • · Be able to identify and select additional information resources for solving problems ability; • Analyze, summarize and apply relevant information for professional purposes skills; • General Professional Competencies • To be able to apply in practice the knowledge of natural and general technical sciences, the methodology of mathematical analysis and modeling, theoretical and experimental research; • To know the basic concepts of mathematical logic, axiomatic methods, understanding of syntax and semantics, accumulation of experience in formal languages, the basics of discrete mathematics, its application in programming, the main methods of processing discrete information • To have knowledge of typical properties, presentation of certain problems in the form of graphs, methods of solution, flows in the

		network and trees. • To possess the knowledge of different definitions of probability and its calculation rules, application of absolute probability and Bayesian formulas, distribution laws of discrete and random quantities and their numerical characteristics, the law of large numbers and the main essence of central limit theorems, basic elements of mathematical statistics must know the statistical definition, the laws related to the normal distribution, the statistical evaluation of parameters and the establishment of the confidence interval, the methods of testing statistical hypotheses
	Master programs	
	• Communication skills • Intercultural communication • Self-organization and individual development • Emergency management	• General Professional Competencies • Must know the topologies of computer networks, the various communication hats used to transmit information, be able to install a computer network. • Must know different network models, including ISO-OSI model levels, working principle. • Must know the working principle of different network technologies, server technology. • Must have knowledge of Internet network services and protocols, domain names, basic TCP / IP protocol. • Must know the stages of development of computers and von Neumann architecture, know

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		the basic hardware of computers (CPU and main memory), their working principle and basic performance. • Must have knowledge of computer hardware interactions and the hardware (bus, controller, and driver concepts) that enable this connection. Must know the peripheral devices of computers (external memory, monitor, printers, keyboard, mouse, etc.), their working principle and basic indicators. Must be able to compare different computers according to their technical specifications. Must be able to determine the configuration of the computer that meets the parameters specified in the table. • Independently acquire, expand and use knowledge of mathematics, natural sciences, sciences and other professional knowledge in non-standard problem solving; • Develop own algorithms and software, incl. using modern smart technologies, in order to solve problems in a professional environment. • Examine data related to the profession, highlight the key points, structure it, format it, and present it as analytical surveys; • Apply scientific principles and research methods to practice; • Develop and modernize software and hardware used in information and automation systems;

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		• Examine current issues and methods used in applied computer science and information society development issues; • Use research methods and mathematical modelling methods related to information system design and management; • Efficiently manage the process of software development and project development.
Gaps		
1. Not meeting the requirement for minimum work experience 2. Knowing additional foreign language at the required level 3. Configuration and support of cash register equipment/acquiring equipment/network equipment on remote points of sales 4. Maintenance of the local area network and the relevant equipment. 5. Equipment commissioning and start-up, incl. data transmission networks, video surveillance networks, server equipment. 6. Software debugging in cooperation with the microcontroller system developer		

Table 11. Competencies Gap Analysis Results: Computer sciences

Thus, in the framework of training in the direction of “Oil and Gas Engineering” and "Applied Informatics" identified 33 relevant and demanded labor market competencies, which are implemented in this or that network. At the same time, there are 16 competencies, which are not disclosed in the framework of training in bachelor's and master's degrees, but are in demand among employees.

A comparative analysis of the results of Russia, Belarus and Azerbaijan showed that the following mechanisms can be proposed to overcome these gaps:

- development of innovative scientific concepts for the organization of practices;
- organization of meetings with successful graduates;
- improvement of the theoretical and methodological model of practice management, with an emphasis on the leading role of professional specialists;
- improvement of professional development programs for future specialists based on competency-based and personalized approaches;
- strengthening the motivation of students on the basis of issuing them letters of recommendation, gratitude from the organization that is the basis for the internship, which will make it possible for students to receive additional bonuses to scholarships or other material incentives;

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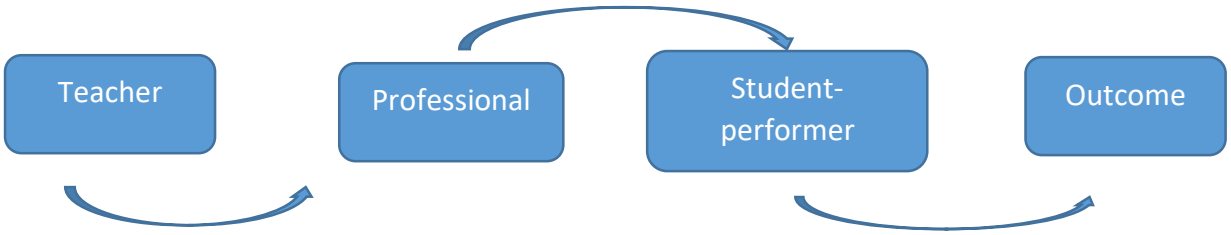
- organizing lectures for students by specialists from partner organizations on the essence, target orientation and tasks of future practical activities;
- strengthening the special theoretical training of students before the internship;
- holding extracurricular activities (master classes, seminars, conversations) in order to develop students' employment and career skills, etc.

E. Policy Recommendations for HEIs

Discussions that took place at UniLab project meetings but most importantly the feedback collected from the labor market showed that structural change is needed to develop high-quality work-based learning and strong apprenticeship systems, involving long-term commitment by employers and policymakers, contribution of teachers, students and other stakeholders into the development and implementation of WBL philosophy.

As stated above, the benefits from WBL strategy for individuals, enterprises and indeed society at large cannot be overestimated. Along with on-going reforms, immediate results can also be obtained by investing in other forms of work-based learning, especially into internships (educational, professional and pre-diploma).

To succeed in WBL strategy development effective collaboration by a wide diversity of stakeholders is needed to put into practice the three key approaches and forms of WBL that are described in the document. As a result of WBL implementation the following chain of transformation should take place:



In the process of WBL state-of-affairs analysis we have outlined the problems that arise when implementing practice-oriented learning in a university:

- Overcoming the teacher's stereotype of thinking on the organization of the learning process: move from the technology of transferring knowledge to the technology of learning with the acquisition of experience.
- Increasing the professional competence of the teacher in the knowledge of production.
- Development of long-term mutually interested relations with enterprises and organizations in the field of education.
- Development of research and design work with the participation of students.
- To practice the issuance of cross-cutting creative projects to undergraduate students, turning into final qualifying works.
- To have at the departments, especially those graduating, plans and activities to increase students' motivation for learning.
- TPU institutes need to have an effective system for finding and stimulating talented students, involving them in the implementation of grants, scientific research, real projects and economic contracts on assignments from enterprises and organizations.

To overcome existing WBL deficiencies and facilitate cooperation between academia and labor market UniLab Partner Countries would like to offer the following recommendations to university leadership that have a common character for Russia, Belarus and Azerbaijan.

(1) arrange internships where students familiarize themselves with the requirements for the professional and high-quality performance of duties, would be aware of the level of wages and social policy and mission of the company;
(2) include the training programs in specialized IT programs as part of professional development programs;
(3) Introduce more consulting services to students and alumni job hunting, resume writing, job interviews and others;
(4) established specialized structures or cells at a faculty/department levels to assist with internship arrangement;
(5) arrange job fairs with attended by specialists from the industry to meet with students and conduct workshops;
(6) create in universities (at faculties, departments) database of graduates working in the major they have completed;
(7) create university mini-companies, start-ups to ensure student's internships there;
(8) initiate projects and volunteer groups for specific practical tasks on the basis of branches of the departments at the places of practice;
(9) introduce coherent and continuous practice from throughout the whole study period;
(10) elaborate innovative scientific approaches to develop new forms of practice;
(11) arrange meetings with successful graduates on a regular basis;
(12) improve theoretical and methodological model of practice management, with an emphasis on the leading role of professional specialists;
(13) improve professional development programs for future specialists based on competence-based and personalized approaches;
(14) enhance students motivation by granting to the best the letters of recommendation, other noble rewards from the organization, which will allow students to apply for scholarships;
(15) arrange lectures by specialists from partner organizations;
(16) conduct extracurricular activities (master classes, seminars, conversations) in order to develop students' employment and career skills.

MANAGEMENT

The survey showed that the present-day labour market puts stress on the acquisition of risk-management skills, which reflects the nature of business environment nowadays when due to pandemic and unstable economic, political and social situations on a global scale, the future manager should be able to forecast, operate and keep the business afloat irregardless of any crisis.

Recommendation 1

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To introduce modules that train risk-management skills. The future managers are expected to predict, possibly avoid and operate business successfully during crisis.

Another skill which is demanded by the labour market is related to start-ups. Students are expected to know strategies for start-up entrepreneurs. Labour market expects that university will teach those strategies and at the same time develop the entrepreneurial spirit with students and even before graduation will transfer entrepreneurial initiatives into a feasible product. To bring this skill into life, a cooperation between companies and university where students develop real products or services under the guidance of a certain company that is committed to bring the developed product or service to the market is required.

Recommendation 2

To develop entrepreneurial skills and gain a first-hand experience, universities are expected to cooperate with labour market to assign students with real-life start-up projects in the format of a new product or service that will be offered by the company to the real market.

One more gap has been revealed by the survey, which is a broad sense can be put as the knowledge of Psychology. Apart from math, economics and finances, an effective manager should have knowledge in personal, inter-personal, organizational and social psychology to be able to manage his team by assigning and delegating tasks and motivation.

Recommendation 3

To enrich the educational programs with different areas of psychology, focusing on personal, inter-personal, organizational and social philosophy. The vast knowledge of psychology is required by the labour market to be able to motivate employees to achieve better work results and develop new incentives.

According to the labour market, manager is the one who should have the knowledge and skills to train members of the team. For this basic teaching or mentoring skills are required for a professional manager.

Recommendation 4

Within Master programs to introduce teaching/mentoring modules that will develop competences in training, usage of the appropriate methodology to train company's employees in a number of areas, like team building, communication, motivation, time-management and others.

Along with broad recommendations provided above, specific ones were elicited by the labour market at Bachelor and Master levels:

Bachelor programs	**Master programs**
• Strategic planning, product sales plan development and implementation;	• Budget management • Big team management

monitoring performance related to commodity circulation • Skills needed for B2C/ B2B sales Development of legal norms and regulations	Innovation management

APPLIED INFORMATICS

The survey revealed that the Federal State Educational Standards contain generic skills that are not often required by the labour market. For instance, self-development skills, time-management and a good physical form are not that relevant to the labor market as such transversal skill as analytical thinking and systems thinking.

Recommendation 1

To reduce workload in disciplines developing such generic skills as time-management, physical training and self-development for the benefit of other transversal skills, like analytical thinking, systems thinking and presentation skills.

As the number of Internet users keeps growing worldwide, E-safety has been prioritized by many countries nowadays. Universities are expected to teach how to be safe on the internet and should be maximizing a user's awareness of personal safety and security risks to private information, and the self-protection as well as company's protection from computer crime. Since much attention has been recently attributed to cyber safety and protection of digital rights and information, employers require the knowledge of the Russian legislation in a broad area of digital information flow and safety securance.

Recommendation 2

To enrich education program with modules covering a variety of topics linked to cyber security, including Russian and EU legislation in information protection legislation.

FSES do not specify Big data tolls or names of web applications and web-based services, although the current labor market puts forward very specific demands with regard to those IT programs and software.

Recommendation 3

To add optional courses that would teach students how to use specific Big data instruments as well as web-applications. The most demanded Big data tools, selected by employers, are: Apache Airflow, Apache Flink, ClickHouse, Redis, GridGain, Apache Ignite, Tarantool, SyslogNG, WinlogBeat, ELK stack, Cloudera. The most demanded web-applications are: HTTP, TCP/IP, HTML/CSS, JS.

FSES in Applied Informatics state that the graduates should be able to correspond and conduct negotiations in the Russian language, but say nothing about the knowledge of other

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foreign languages. According to the survey, employers find it necessary to have a good command of English.

Recommendation 4

To increase the number of teaching hours for the English language to ensure that the graduate obtains level B2 or higher, including specific terms need to be able to communicate orally and in writing on a variety of professional topics, correspond, read professional literature and conduct negotiations in English.

Along with broad recommendations provided above, specific ones were elicited by the labour market at Bachelor and Master levels:

Bachelor programs	Master programs
• Maintenance of the local area network and the relevant equipment. • Equipment commissioning and start-up, incl. data transmission networks, video surveillance networks, server equipment. • Configuration and support of cash register equipment/acquiring equipment/network equipment on remote points of sales	• Operations with neural networks using Tensorflow/PyTorch. • Knowledge of telecommunications protocols or radio communication protocols • Developing graph and sequence partition methodology based on the use of a tensor microprocessor. • Operations with neural network compilers/optimizers (XLA, TVM). • Software debugging in cooperation with the microcontroller system developer

PR AND ADVERTISING

As it has already been shown in previous surveys, the labour market puts forward more specific and detailed information about the tools and technologies in PR and Advertising a university graduate should be trained in. For instance, MICE industry has been developing rapidly and professionals in PR and Advertising should have experiential learning in arranging national as well as international marketing events (meetings, conferences, exhibitions and others).

Recommendation 1

To offer compulsory modules teaching MICE strategies in the national as well as international dimensions in the Russian and English languages.

Since there is a growing tendency to visualize advertisements and most often in the form of blogging, labour market requires from the graduate the skill to use video recording soft as well as

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video editing programs to be able to produce advertising clips or to be able to shoot and cut them.

Recommendation 2

To add modules that will develop skills in film shooting and video editing foe the graduates to be able to produce commercials, or to manage the production studio, or to effectively cooperate, assign tasks to and monitor bloggers' work.

Employers put a lot of stress on the ability to communicate both orally and in writing in Russian and English languages using stylistic devices and different communication strategies to convey ideas ain the most compelling and comprehensive manner.

Recommendation 3

To offer courses for the students to acquire the skill of using different stylistic devices when composing texts, switching language codes.

To introduce a course that will teach to manage and regulate public opinion by means of well-structured and influential writing and oral presentations.

Despite the fact that FSES has several competences aimed to develop skills of acting in bob-standard situations, the labour market seems to ignore that type of skill. In the same manner the labour market keeps silent about the necessity to perform any scientific investigations using either qualitative or quantitative research methods.

Recommendation 4

To minimize the workload in subjects teaching research methods in PR and Advertising, theories' elaboration.

Along with broad recommendations provided above, specific ones were elicited by the labour market at Bachelor and Master levels:

Bachelor programs	**Master programs**
• Behavioural models and gamification • Moderating, facilitation and mediation • Design • Work automation • No-code software development	• Business model development • Managers' documents • Project documentation • Efficiency assessment • Content and event planning • Text editing • Data visualization • Copyright and intellectual property rights legalization

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OIL AND GAS INDUSTRY

Professionals surveyed by UniLab consortium in Oil and Gas industry have identified three main challenges of the industry today:

1) Necessity to produce more energy at lower cost with less emission. The consumption of energy has increased drastically due to Covid-19 and population growth.
2) At the same time, the world is demanding cleaner energy so oil and gas companies must supply this energy with less emissions.
3) Creative thinking and resilience in a time of uncertainty.

Thus, the competence gaps analysis showed that graduates are lacking transversal skills that would develop creative thinking and resilience. Another point highlighted by the industry is the urging need to embed ecological disciplines in to study programs and develop 'green consciousness' or awareness of the responsibility for the pollution caused mainly by the extraction and use of the natural resources. At the same time the increasing consumption of the natural resources should encourage universities to develop brand new approaches in the energy consumption and distribution, gradually shifting to the green energy (water, sun, wind).

Recommendation 1

To enrich educational program with modules that will enhance the skills below:

- **IT competencies (cyber security, artificial intellect);**
- **knowledge of the requirements of labour protection, industrial and environmental safety;**
- **communication skills, the ability to work in a team;**
- **multi-tasking, the ability to quickly react to new goals and tasks;**
- **creativity and out-of-the-box thinking.**

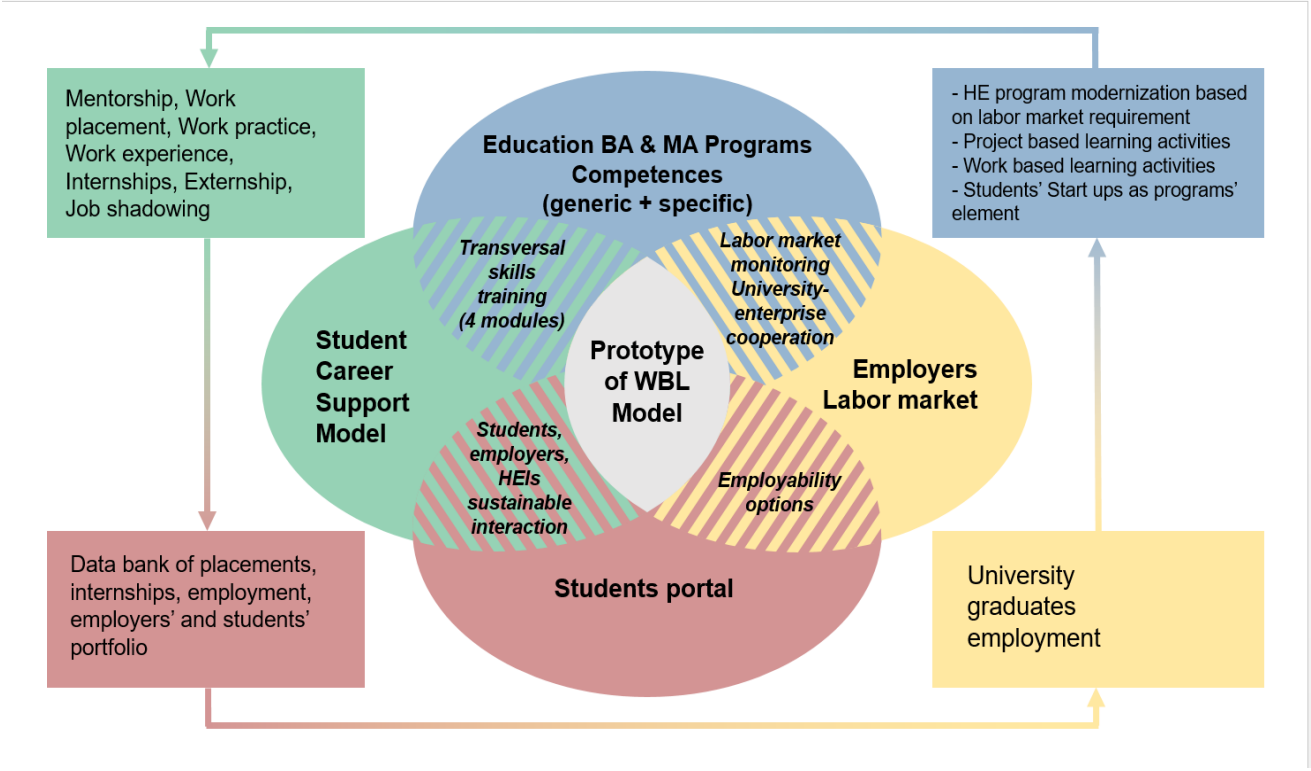
Since the share of fossil fuels on a global scale keeps deceasing and new technologies ensure a safe transition to alternative technologies and sources of energy, oil and gas companies are anxious about conquering the emerging markets of alternative energy.

Recommendation 2

To expand fundamental and applied scientific research in the field of energy-saving, environmentally friendly technologies and non-traditional energy sources.

F. Further Development and Transition to WBL UniLab Model

UniLab Partner Countries are aiming to expand the scope of cooperation between academia and business and go beyond the constraints of tasks of work packages and introduce a holistic approach to WBL development and implementation to multiply the practical outcome of the project. Partner Countries have now been working on a model of WBL that comprises the areas below:



Graph 1. Work-based learning UniLab Model

The graph below presents a model of work-based learning to be disseminated among Program Countries universities. The present model comprises both educational and administrative structures of universities that are to be implementing WBL strategy. WBL includes a variety of practice-oriented learning activities at university as well as internships, apprentices, entrepreneurship and others.

From educational perspective, universities regularly update education programs to meet the current demands of the labor market in generic and subject-specific competences. Apart from BA and MA education programs that are to be updated, students are offered professional development courses:

- Self-understanding;
- Job opportunities, thriving at workplace;
- Entrepreneurship and self branding;
- Managing work pressure and problem-solving.

Thus, the educational component of the Model is represented by the main educational programs and professional development programs that will develop students' generic and subject-specific skills and increase career chances for the fresh graduates.

The administrative component of the Model is represented by Student career centers, which exist in most universities in the post-Soviet countries, provide assistance to students in finding a place for internships and employment. It is common practice for such centers to hold job fairs to which various employers are invited that are assigned with the following functions:

1. To develop partnership with business, accommodating industry and students needs to the demands of the labor market;
2. Prognostic function to inform the university leadership of the emerging professions and those that become outdated;
3. Research and monitoring of labor market to report back to the university leadership of changes and emerging demands;
4. To operate Student's portal to assist companies with interns and students to select the right company for internship;
5. To sub professional development programs for students, arrange workshops and other activities between labour market and university.

When projecting WBL UniLab Model Partner Countries consortium members were guided by the experience of European partners, where educational program is a carefully designed educational product that competes with other similar programs in the educational market. The design or development of such a program is based on an analysis of the labor market.

Thus, Career centers may become a useful tool to support mentors and educational programs leaders in search for work placement, work practice, work experience for students, based on the extensive experience of the center's employees in interacting with the labor

Co-funded by the Erasmus+ Programme of the European Union

market, and on the other hand , according to a deeper vision of the program developers of the needs of the market, based on the monitoring carried out during the development of such a program.

The most effective and innovative tool can be the result of the UniLab project - a student portal that will allow you to place the Bank of data about placements, internships, employment, employers' and students' portfolio, which will make it much easier for students to find an employer and an employer to find staff. Employability options will allow you to find the right internship and employment in the most efficient way and create Students, employers, HEIs sustainable interaction.

As a new form of internship, it is also possible, based on the experience of European partners, to validate the volunteer activities of students as recognition of internship.

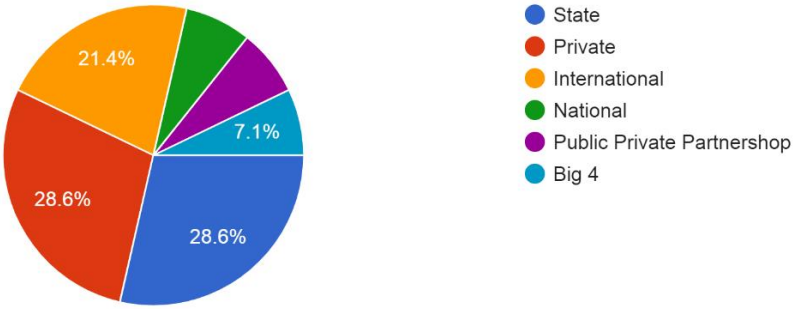
To conclude, this model is an innovative tool for the integration and interaction of all elements of the system and will create a synergistic effect that contributes to the effective building of the WBL program in Russia and the post-Soviet countries.

Annex 1

Khazar University – Labor Market Survey

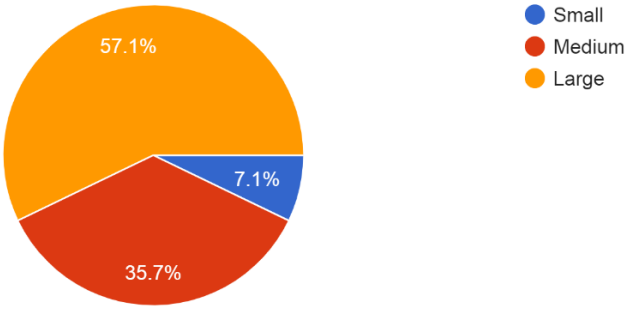
2. WHAT IS THE LEGAL ENTITY OF YOUR COMPANY?

14 responses



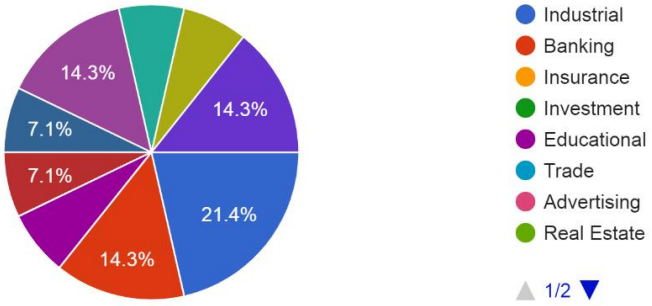
3. THE SIZE OF YOUR COMPANY IS ...

14 responses



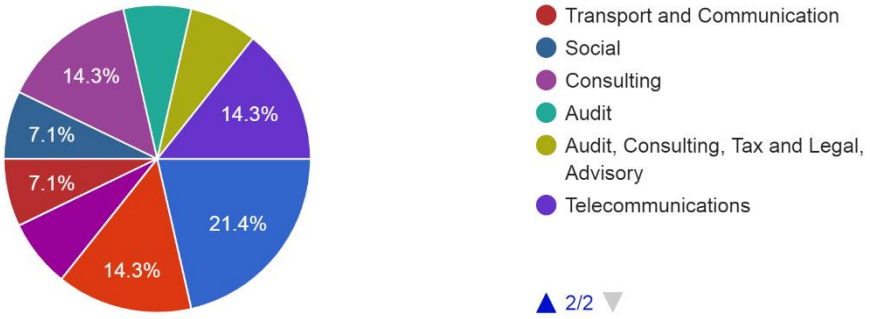
4. YOUR COMPANY'S SPHERE?

14 responses



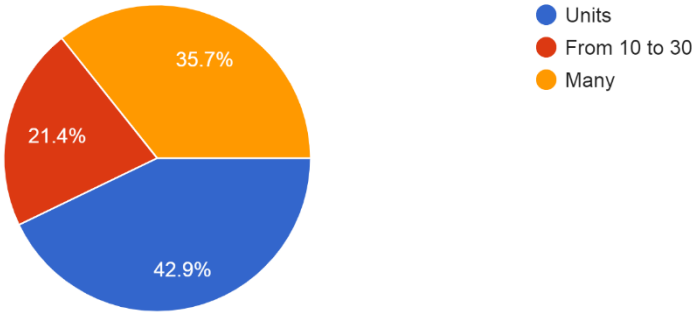
4. YOUR COMPANY'S SPHERE?

14 responses



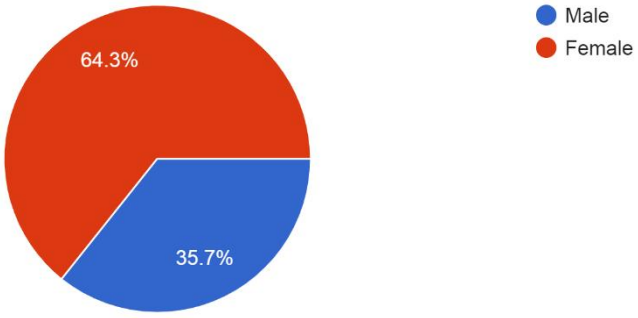
5. HOW MANY KU GRADUATES ARE EMPLOYED BY YOUR COMPANY?:

14 responses



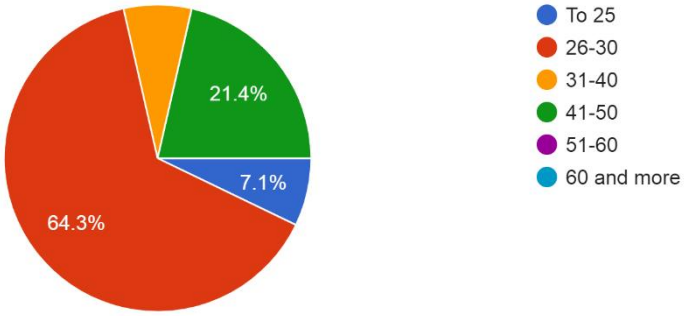
6. YOUR GENDER

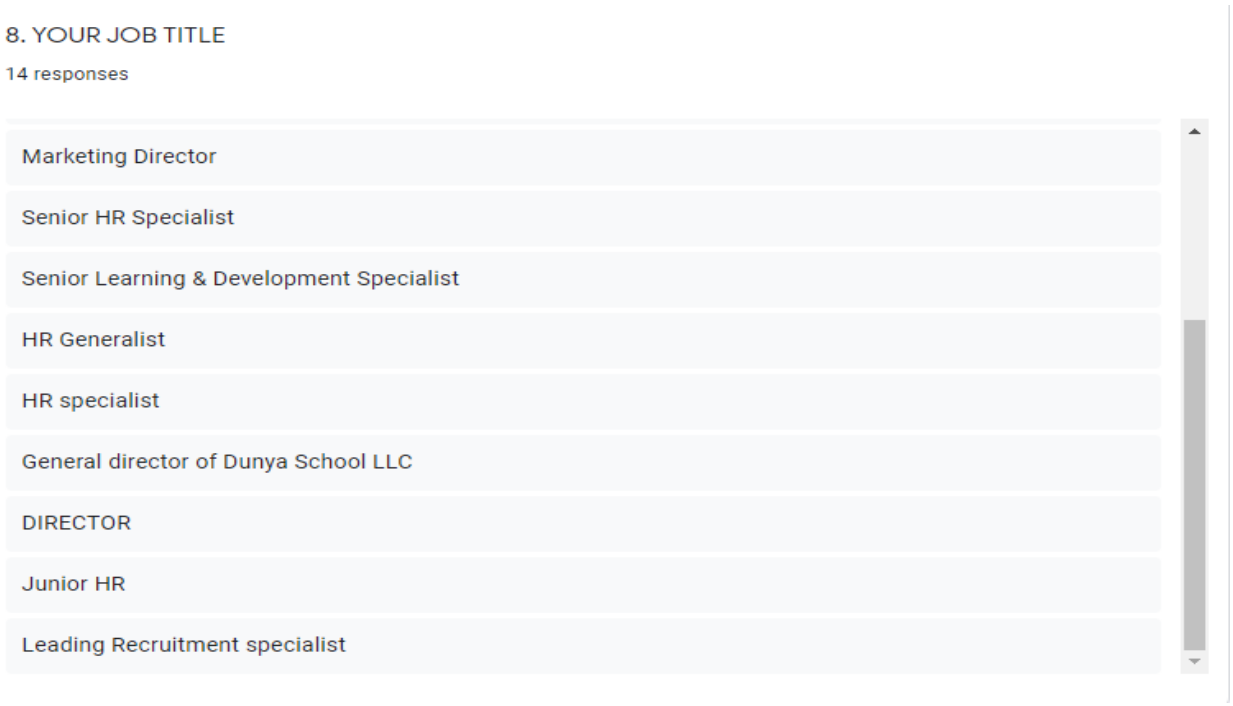
14 responses

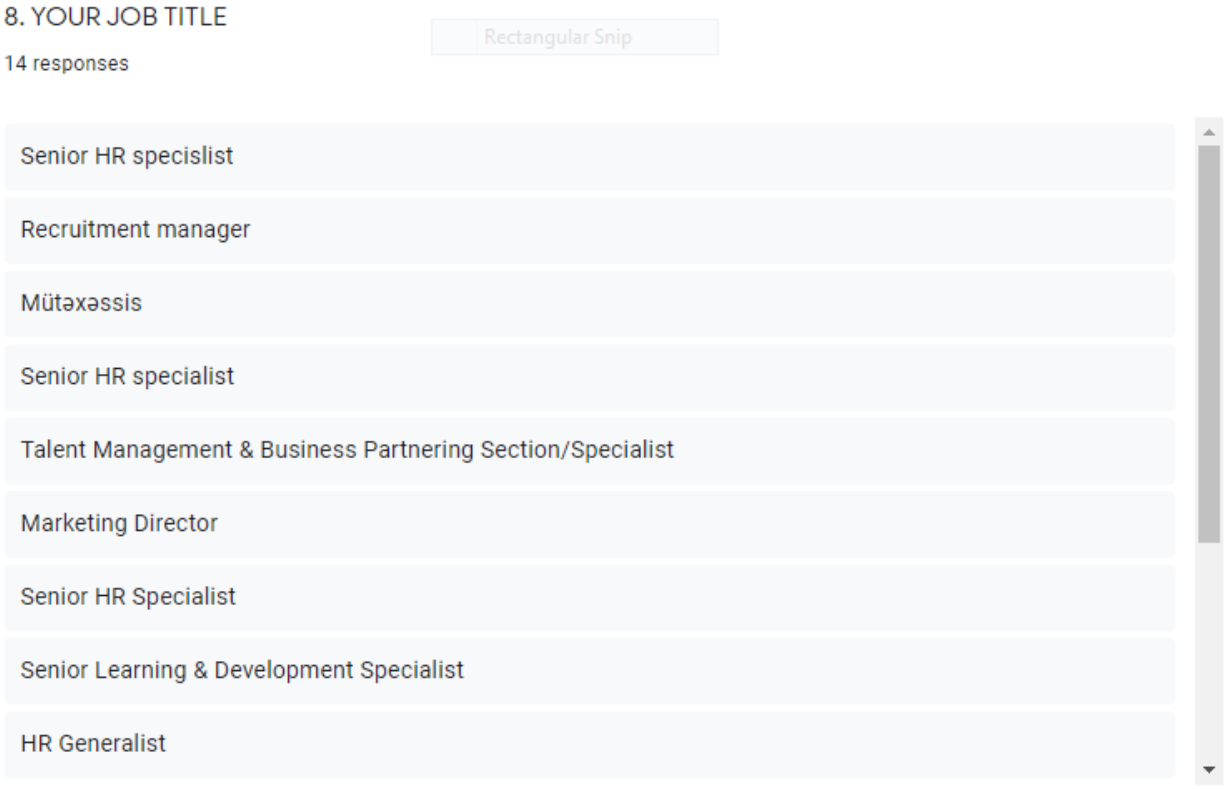


7. YOUR AGE

14 responses

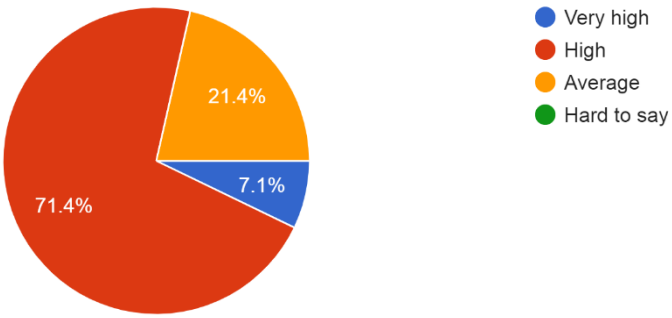






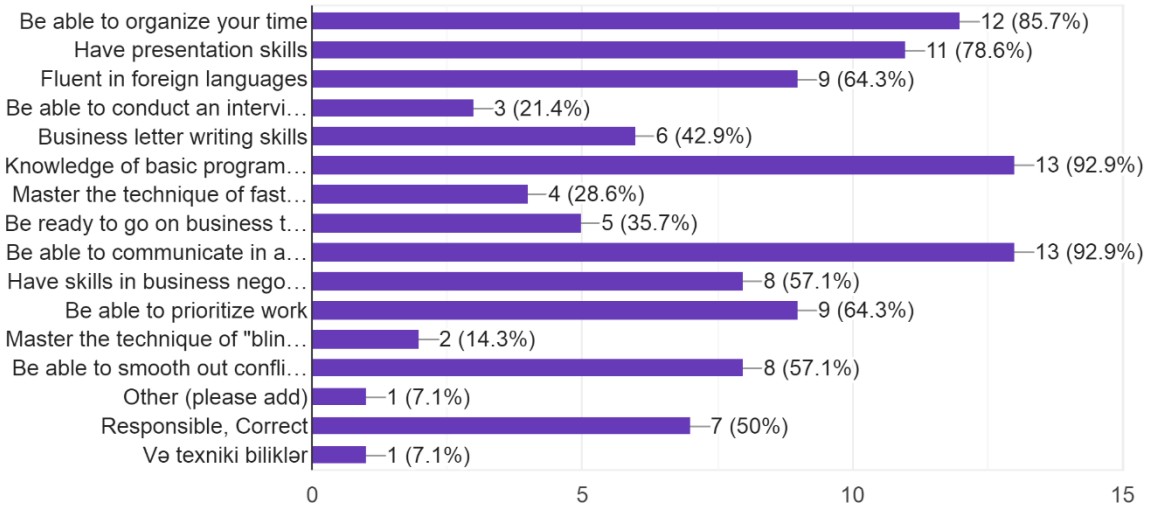
9. PLEASE RATE THE PROFESSIONAL LEVEL OF KU GRADUATES:

14 responses



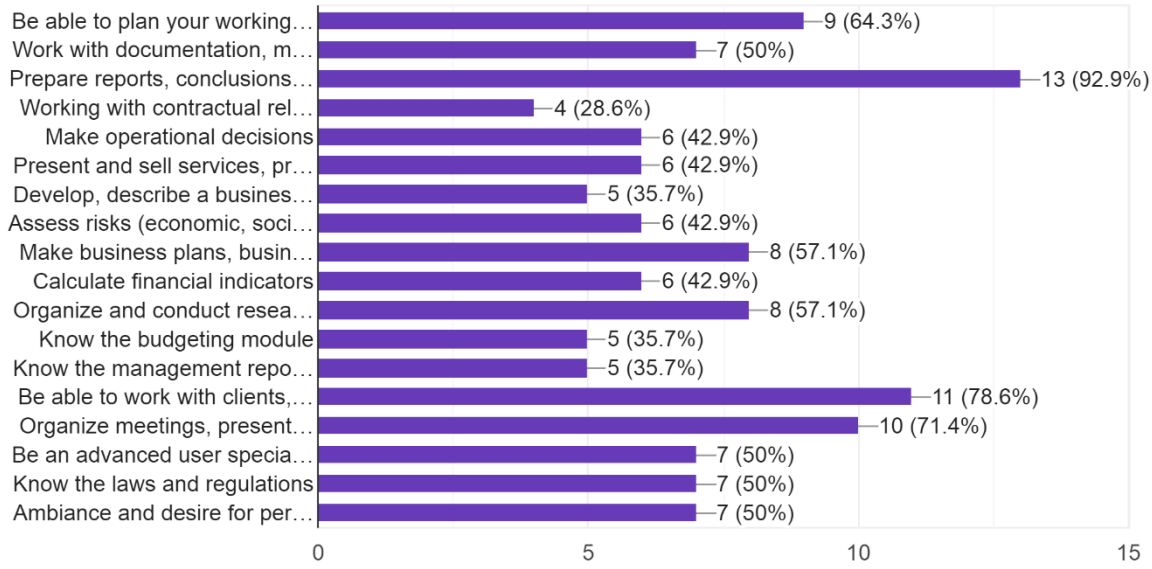
10. WHAT SKILLS INDIRECTLY RELATED TO PROFESSIONAL ACTIVITIES, IN YOUR OPINION SHOULD BE A SPECIALIST OF YOUR ORGANIZATION? Tick several items

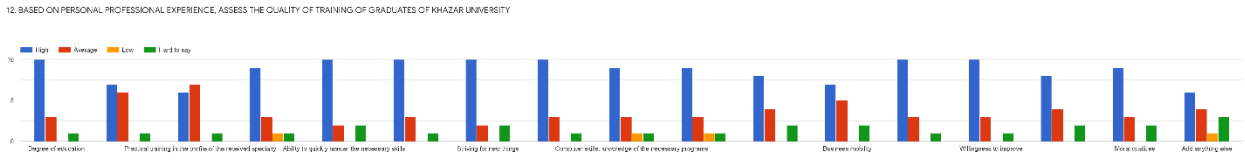
14 responses

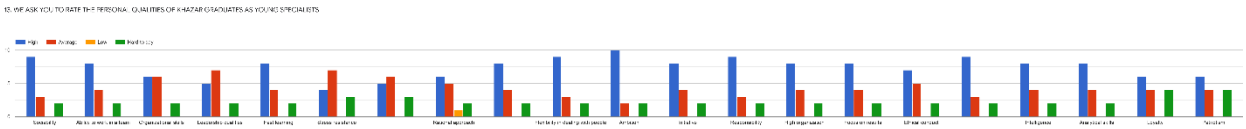


11. WHAT SKILLS DIRECTLY RELATED TO PROFESSIONAL ACTIVITIES, IN YOUR OPINION SHOULD BE A SPECIALIST OF YOUR ORGANIZATION? Tick several items

14 responses

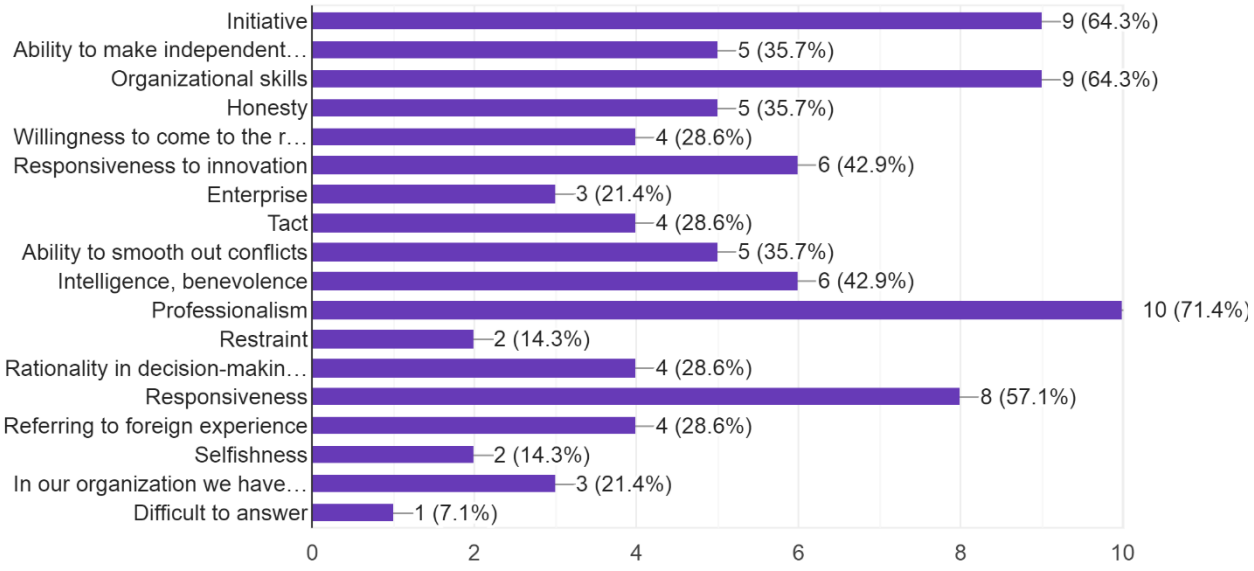






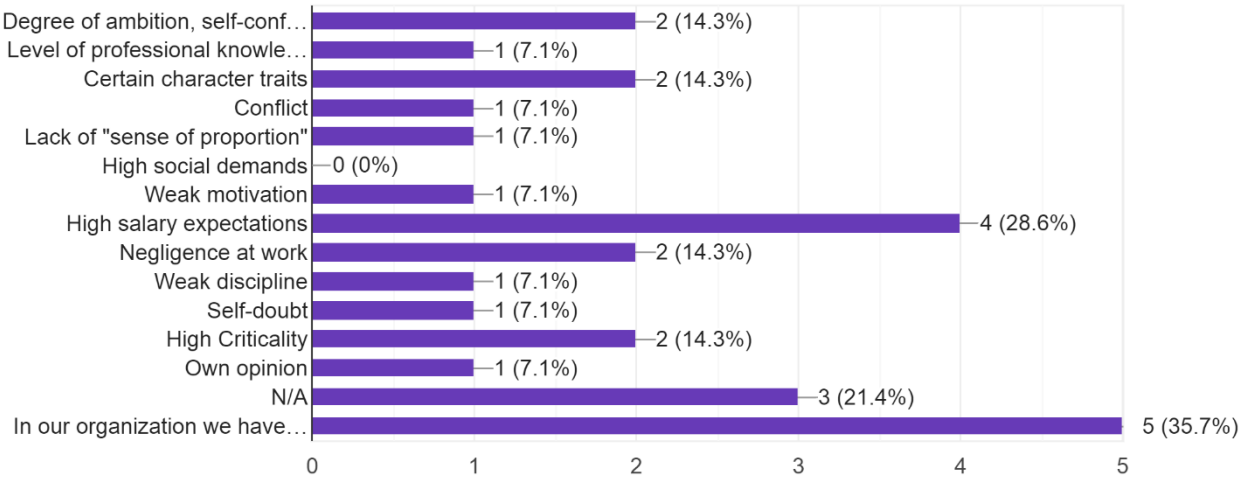
14. WHAT PROFESSIONAL QUALITIES, IN YOUR OPINION, DURING WORK IN YOUR ORGANIZATION, THE GRADUATE OF KHAZAR UNIVERSITY AS A SPECIALIST? (Tick several)

14 responses



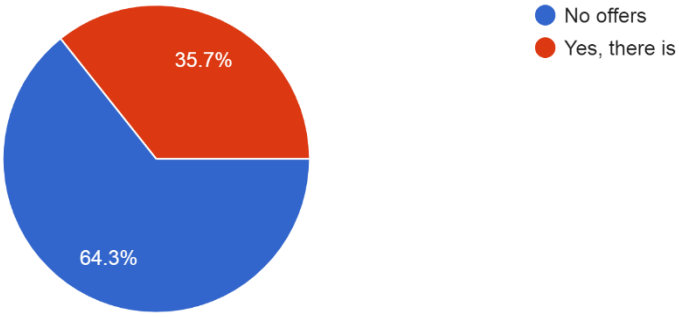
15. WHAT ARE YOU OR YOUR COLLEAGUES NOT SUITABLE FOR IN GRADUATES OF KHAZAR UNIVERSITY? (Tick several)

14 responses



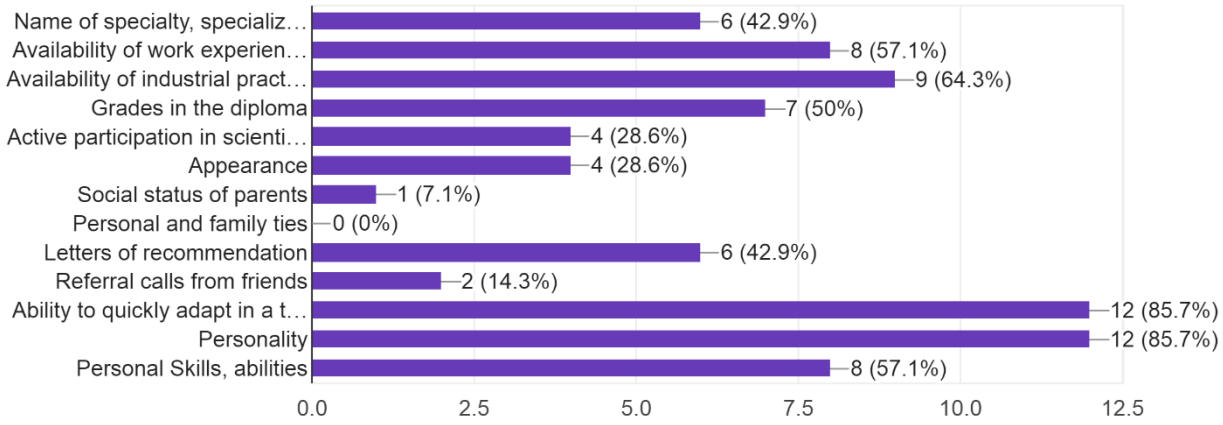
16. ARE YOU READY TO GIVE SPECIFIC PROPOSALS TO IMPROVE THE PROFESSIONAL TRAINING OF KHAZAR UNIVERSITY STUDENTS AND INCREA...OR, EMPLOYMENT AND PROFESSIONAL MARKET?

14 responses



17. FIRST, WHAT DO YOU PAY ATTENTION TO WHEN RECRUITING A YOUNG SPECIALIST? (Tick several)

14 responses



18. IN YOUR OPINION WHAT PROFESSIONAL AND PERSONAL COMPETENCES WILL BE DEMANDED IN THE 21ST CENTURY. PLEASE LIST THEM?

14 responses

n/a

Data Analysis Skills; Technology & Information Management; Emotional Intelligence; Innovation & Creativity; Critical Thinking

Good communication, critical thinking, problem-solving, time management, leadership and ethical view, business acumen, agileness

the ability to communicate effectively is a competence
that may draw on an individual's knowledge of language, practical IT skills and attitudes
towards those with whom he or she is communicating

Responsibility, special treatment with students, ability to work in a team

MUST BE INNOVATIVE

Leadership, High motivation, Honesty

18. IN YOUR OPINION WHAT PROFESSIONAL AND PERSONAL COMPETENCES WILL BE DEMANDED IN THE 21ST CENTURY. PLEASE LIST THEM?

14 responses

Adapt to changes, responsibility, creative thinking, problem solving

Learning agility

Personal skills, Responsibility, Flexibility, Professionalism, Self-confidence, Honesty, Loyalty

Responsibility, communicational skills and so.on

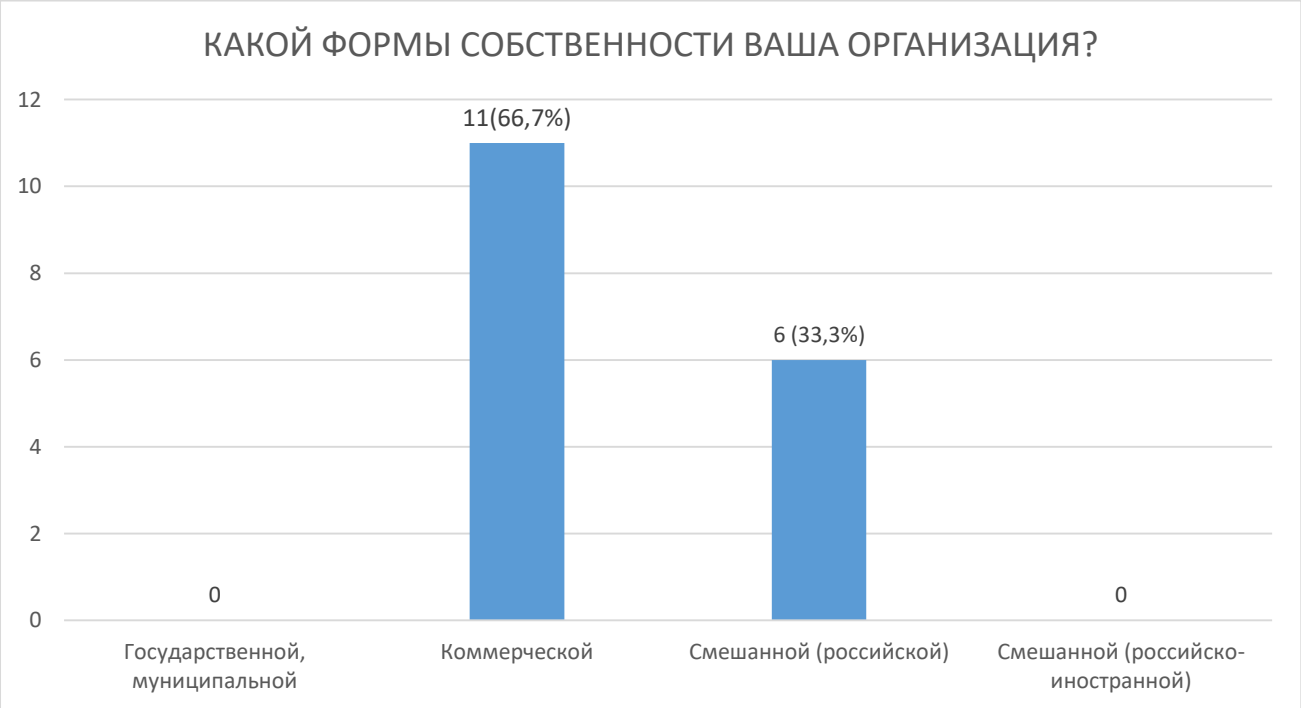
I suggest during classes, give great attention to the study and work on specific programs that are required mainly in all vacancies such as English, Excel, IQ tasks or tests, Analytical tasks and etc. And also students must have such competencies as self-leadership, agile, creativity, customer centricity and integrity.

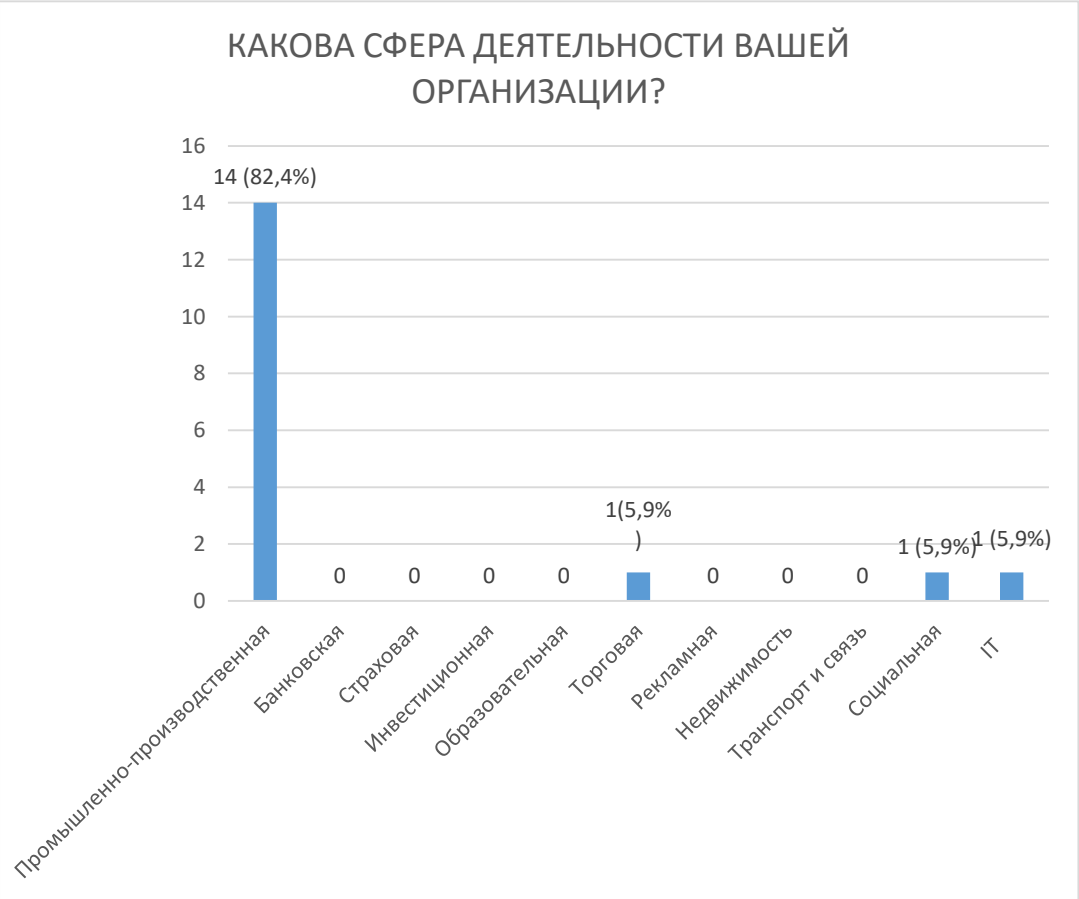
- high analytical thinking ability
- advantage of problem solving
- have an individual view and approach to each issue
- ability to make independent decisions
- to be constantly engaged in personal development

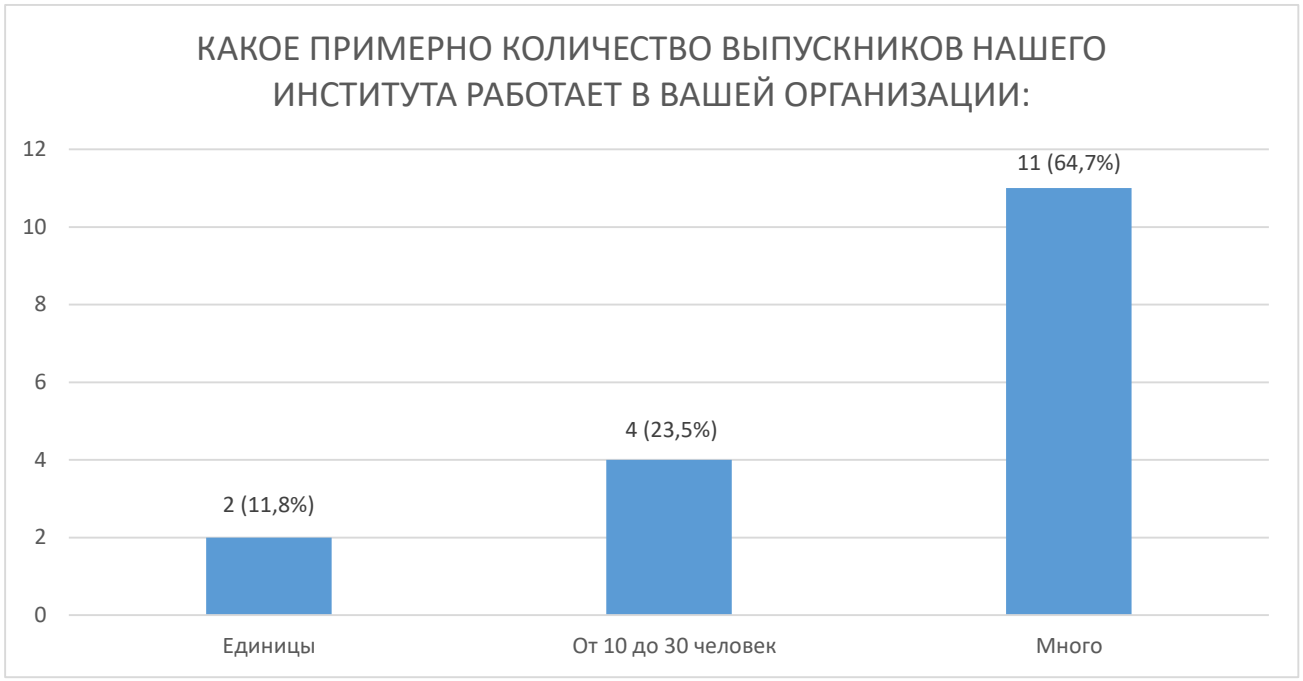
Annex 2

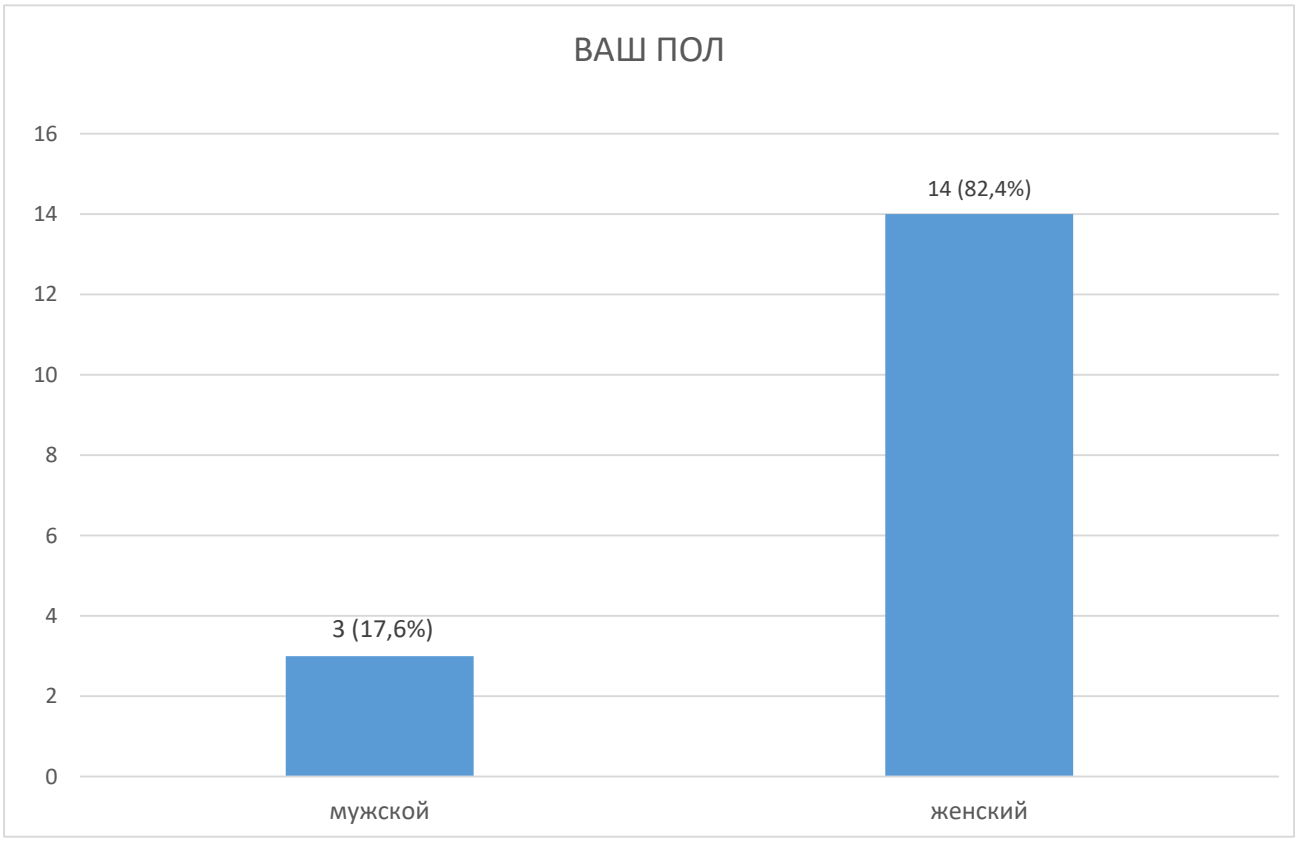
Almetyevsk State Oil and Gas Institute - Labor Market Survey (in the Russian language)

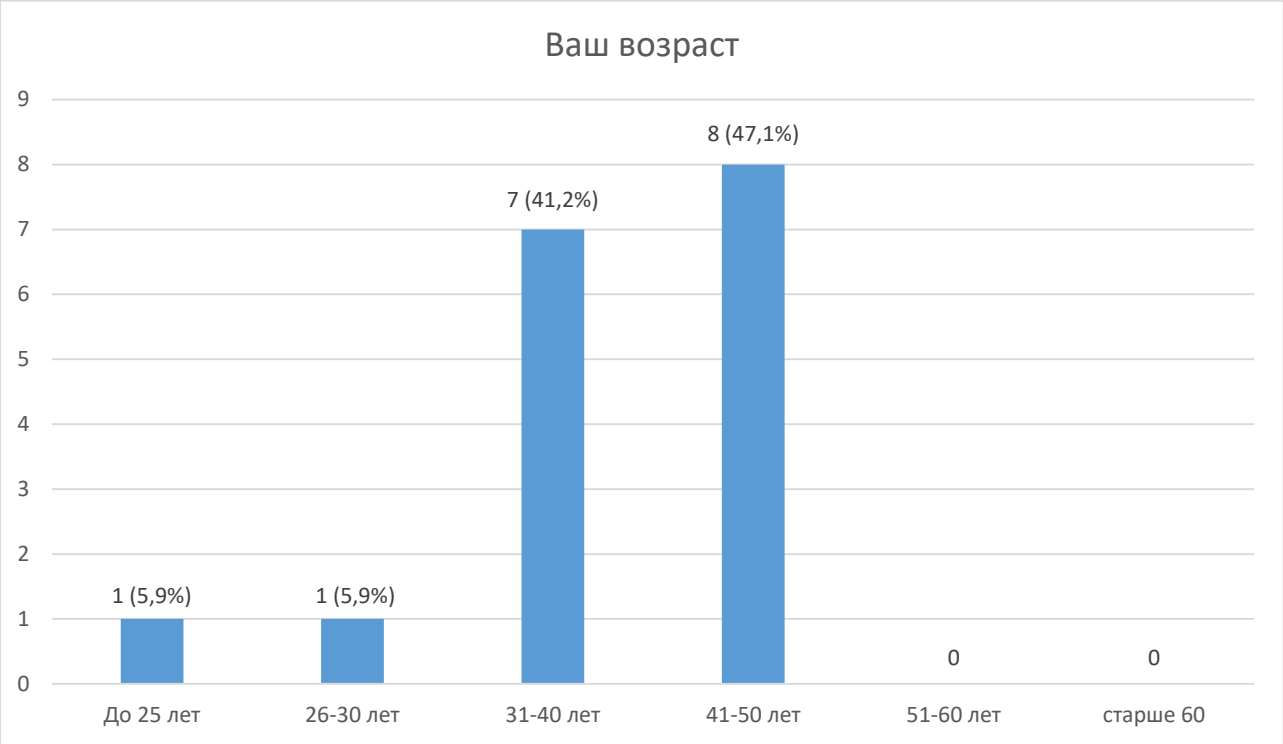
ПОЛНОЕ НАИМЕНОВАНИЕ ВАШЕЙ ОРГАНИЗАЦИИ
ООО "ТаграС-РемСервис"
ГК Миррико
Управление "Татнефтеснаб"
Татарское геологоразведочное управление
Управление по подземному ремонту скважин ПАО "Татнефть"
Институт "ТатНИПИнефть"
СП "Татнефть-Добыча"
Управление социальными объектами
ООО "ТНГ-Групп"
Управление "Татнефтегазпереработка"
Управление по реализации проектов строительства ПАО "Татнефть"
ООО "Татнефть-Самара"
Альметьевское районное нефтепроводное управление (филиал акционерного общества "Транснефть - Прикамье")
ООО УК "Шешмаойл"
ОП «Татнефть – цифровое развитие»
Предприятие Шинного бизнеса Группы «Татнефть»





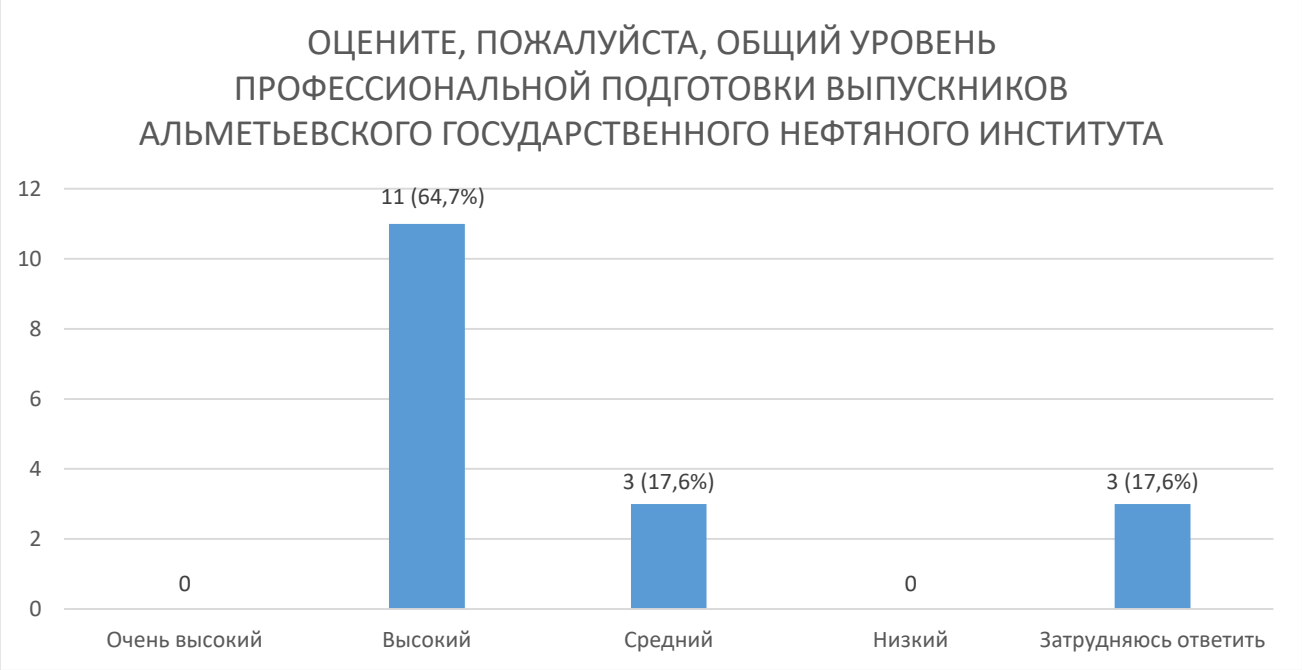

КАКОЕ ПРИМЕРНО КОЛИЧЕСТВО ВЫПУСКНИКОВ НАШЕГО ИНСТИТУТА РАБОТАЕТ В ВАШЕЙ ОРГАНИЗАЦИИ:
12
10
8
6
4
2
0
2 (11,8%)
4 (23,5%)
11 (64,7%)
Единицы
От 10 до 30 человек
Много


ВАШ ПОЛ
16
14
12
10
8
6
4
2
0
3 (17,6%)
14 (82,4%)
мужской
женский

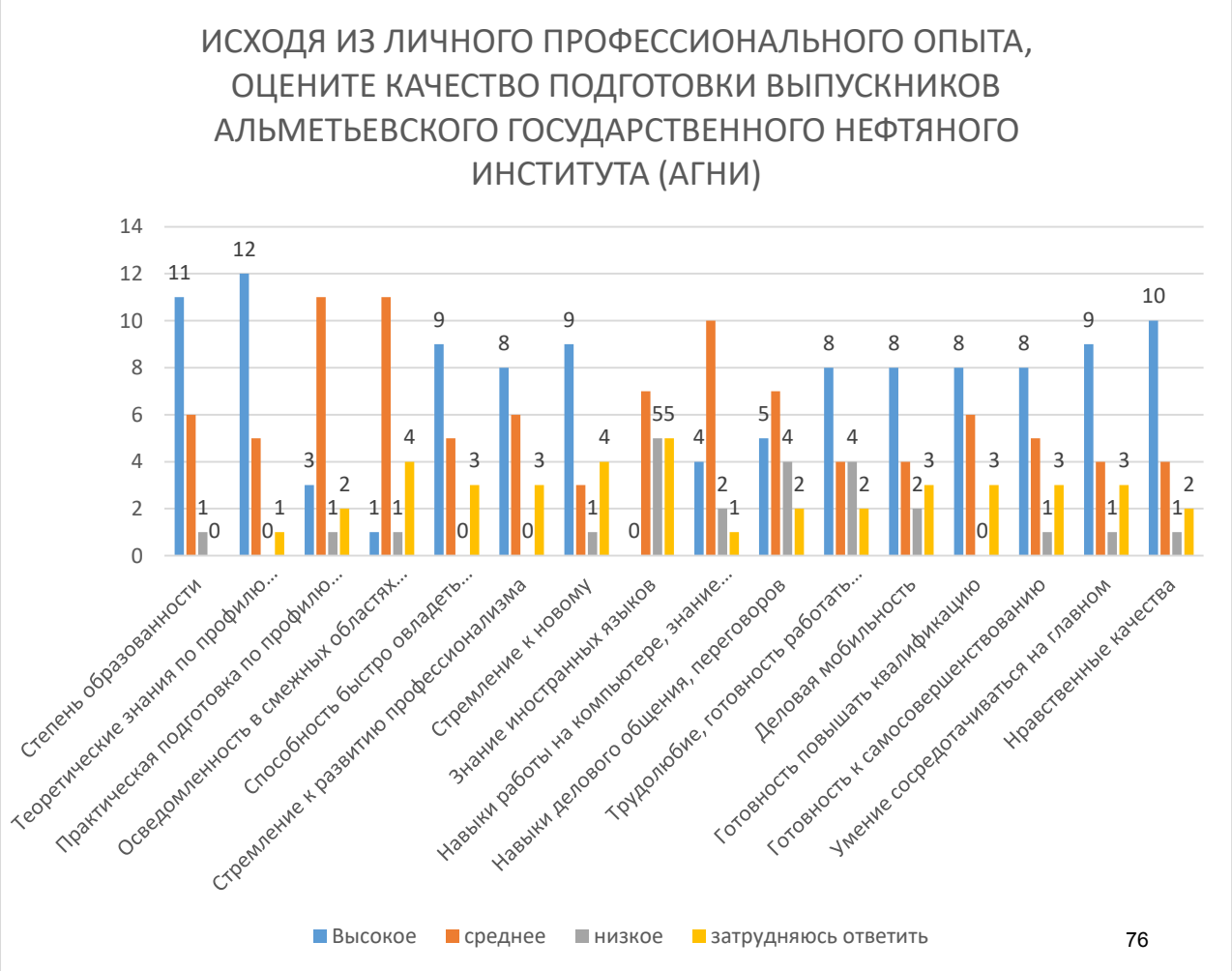


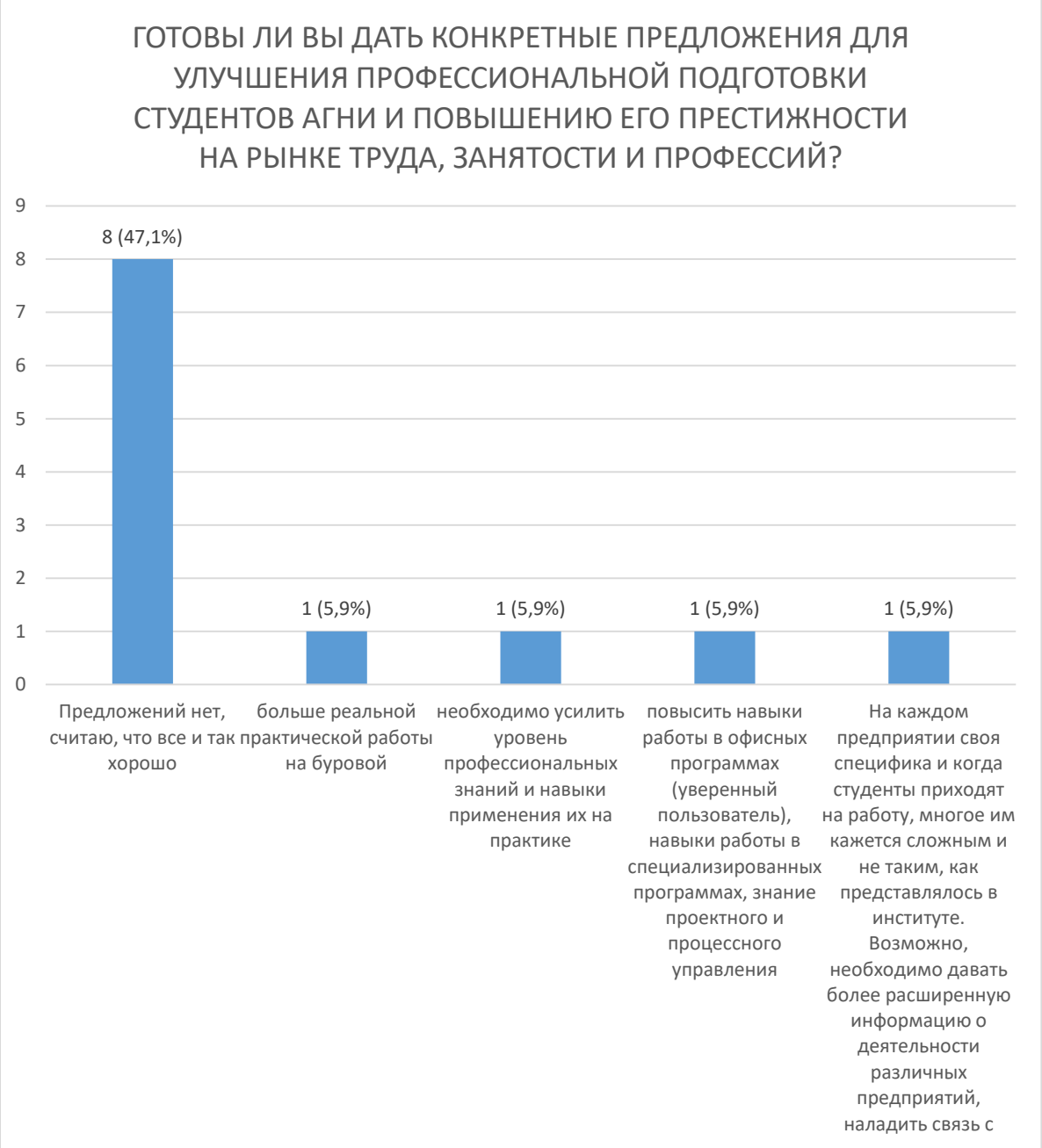
ВАША ДОЛЖНОСТЬ В ОРГАНИЗАЦИИ

Заместитель директора подразделения
Руководитель группы
специалист
начальник отдела
Ведущий специалист
Начальник отдела
ведущий специалист
Начальник отдела
Ведущий инженер по работе с молодежью
Специалист
Специалист
Ведущий эксперт группы
Инженер
Начальник отдела
Инженер
Менеджер
Начальник отдела




КАКИМИ НАВЫКАМИ, НЕПОСРЕДСТВЕННО СВЯЗАННЫМИ С ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТЬЮ, ДОЛЖЕН, ПО ВАШЕМУ МНЕНИЮ, ОБЛАДАТЬ СПЕЦИАЛИСТ ВАШЕЙ ОРГАНИЗАЦИИ?
18
16
14
12
10
8
6
4
2
0
14 (82,4%)
15
17(100%)
9(52,9%)
14(82,4%)
4(23,5%)
9(52,9%)
12(70,6%)
10(58,8%)
8(47,1%)
3(17,6%)
5 (29,4%)
5(29,4%)
4 (23,5%)
10(58,8%)
14 (82,4%)
11 (64,7%)
1(5,9%)
Уметь планировать свое...
Работать с документацией,...
Составлять отчетности,...
Работа с договорными...
Принимать оперативные...
Представлять и продавать...
Разрабатывать, описывать...
Оценивать риски...
Составлять бизнес-планы,...
Рассчитывать финансовые...
Организовывать и проводить...
Знать модуль...
Знать модуль...
Уметь работать с клиентами,...
Организовывать совещания,...
Быть продвинутым...
Знать законодательные и...
Уметь использовать...


ИСХОДЯ ИЗ ЛИЧНОГО ПРОФЕССИОНАЛЬНОГО ОПЫТА, ОЦЕНИТЕ КАЧЕСТВО ПОДГОТОВКИ ВЫПУСКНИКОВ АЛЬМЕТЬЕВСКОГО ГОСУДАРСТВЕННОГО НЕФТЯНОГО ИНСТИТУТА (АГНИ)
14
12
10
8
6
4
2
0
11 12 1 0
12 5 1 0
3 11 2 1
1 11 1 4
9 5 3 0
8 6 3 0
9 3 4 1
0 7 5 5
4 10 2 1
5 7 4 2
8 4 4 2
8 4 2 3
8 6 3 0
8 5 3 1
9 4 3 1
10 4 2 1
Степень образованности
Теоретические знания по профилю...
Практическая подготовка по профилю...
Осведомленность в смежных областях...
Способность быстро овладеть...
Стремление к развитию профессионализма
Стремление к новому
Знание иностранных языков
Навыки работы на компьютере, знание...
Навыки делового общения, переговоров
Трудолюбие, готовность работать...
Деловая мобильность
Готовность повышать квалификацию
Готовность к самосовершенствованию
Умение сосредотачиваться на главном
Нравственные качества
Высокое
среднее
низкое
затрудняюсь ответить



ПО ВАШЕМУ МНЕНИЮ, КАКИЕ ПРОФЕССИОНАЛЬНЫЕ И ЛИЧНОСТНЫЕ КОМПЕТЕНЦИИ БУДУТ ВОСТРЕБОВАНЫ В 21 ВЕКЕ. ПЕРЕЧИСЛИТЕ ИХ?

мир идет к цифровизации и роботизации, я считаю эти направления и будут наиболее востребованы.

КОРПОРАТИВНАЯ ЛОЯЛЬНОСТЬ, ОРИЕНТАЦИЯ НА РЕЗУЛЬТАТ, ОТКРЫТОСТЬ К ИЗМЕНЕНИЯМ, УМЕНИЕ РАБОТАТЬ В КОМАНДЕ, ЭФФЕКТИВНАЯ КОММУНИКАЦИЯ, ЛИДЕРСТВО, ИКТ-КОМПЕТЕНЦИЯ, ОХРАНА ТРУДА, ПРОМЫШЛЕННАЯ И ЭКОЛОГИЧЕСКАЯ БЕЗОПАСНОСТЬ, ГРАМОТНАЯ КОММУНИКАЦИЯ, ПРОФЕССИОНАЛЬНЫЕ КОМПЕТЕНЦИИ ПО НАПРАВЛЕНИЮ ДЕЯТЕЛЬНОСТИ, ПО НАПРАВЛЕНИЮ РУКОВОДИТЕЛЯ УПРАВЛЕНЧЕСКИЕ КОМПЕТЕНЦИИ

умение быстро перестаиваться под поставленные задачи, нестандартное мышление, креативность, информационная емкость, многофункциональность, стрессоустойчивость, расширение базы проф. знаний, знание программ и приложений

Использование информационных технологий, цифровизации наложенные на профессиональные знания

Интеллект, образное мышление, нестандартное мышление

Управление проектами и процессами, работа с ИТ-системами, системное мышление, работа с людьми и работа в команде

Высокий уровень культуры поведения, общения, воспитания, восприимчивость к новациям и изменениям, стрессоустойчивость, профессионализм, грамотность в речи и письме
Эмоциональный интеллект, гибкость мышления, коммуникативность
Быстрая адаптация к новым информационным системам, организованность
коммуникативные, организаторские, инновационность, лидерство, стратегическое мышление
Уровень профессиональных знаний, мобильность
Умение управлять проектами и процессами, умение быстро принимать решение, реагировать на изменения, умение работать в команде, системное мышление, работа с ИТ-системами, коммуникация.
Умение работать в команде, ориентация на результат, ИКТ-компетенции, грамотная коммуникация
Кибербезопасность, программирование, способность системно мыслить и адаптация в коллективе
Профессиональные: умение работать в программах, навыки оптимизации и цифровизации бизнес-процессов; Личностные: грамотная письменная и устная речь, трудолюбие и ответственность.

Co-funded by the Erasmus+ Programme of the European Union

Annex 3

SURVEY
Employer satisfaction
preparation of students at the Financial University

Dear Colleagues!

Within the framework of the research project "Sociological monitoring of the quality of graduates training in the conditions of the formation of a higher professional education system and increasing competition in the labor market and professions", we ask you, as an expert, to pay attention and fill out this questionnaire.

To fill out the questionnaire, you need to mark the answer (or the answer code) that most closely matches your point of view with a marker of any color. If you want to express your dissenting opinion - state it in free lines.

The survey is anonymous.

Thank you for your cooperation!
Moscow, 2021

First of all about your company

1. YOUR COMPANY NAME_____

2. WHAT IS THE LEGAL ENTITY OF YOUR COMPANY?		**3. THE SIZE OF YOUR COMPANY IS ...**	
Private	**2**		
Mixed (Russian)	3	Small	1
Mixed (Russian-Foreign)	4	Medium	2
		Large	**3**

YOUR COMPANY'S SPHERE?

4.	Industrial	1
5.	Banking	1
6.	Insurance	1
7.	Investment	1
8.	Educational	1
9.	Trade	1
10.	Advertising	1
11.	Real Estate	1
12.	Transport and Communication	1
13.	Social	1
14.	Other *please specify* _	

15. HOW MANY FU GRADUATES ARE EMPLOYED BY YOUR COMPANY?:

Units	1
From 10 to 30	2
Many	**3**

16. OUR GENDER

M	F
1	2

17. YOUR AGE

To 25	26-30 y.o.	31-40 y.o.	41-50 y.o.	51-60 y.o.	60 and more
1	2	3	4	5	6

18. YOUR JOB TITLE

_____

19. PLEASE RATE THE PROFESSIONAL LEVEL OF FU GRADUATES:

Very high	**1**
High	2
Average	4
Hard to say	5

WHAT SKILLS INDIRECTLY RELATED TO PROFESSIONAL ACTIVITIES, IN YOUR OPINION SHOULD BE A SPECIALIST OF YOUR ORGANIZATION?

Tick several items

20. Be able to organize your time	1
21. Have presentation skills	1
22. Fluent in foreign languages	1
23. Be able to conduct an interview	1
24. Business letter writing skills	1
25. Knowledge of basic programs Excel, Project, Power Point	1
26. Master the technique of fast reading	1
27. Be ready to go on business trips, incl. foreign	1
28. Be able to communicate in a team	1
29. Have skills in business negotiations	1
30. Be able to prioritize work	1
31. Master the technique of "blind typing"	1
32. Be able to smooth out conflicts in a team	1
33. Other (please add) _____	

WHAT SKILLS DIRECTLY RELATED TO PROFESSIONAL ACTIVITIES, IN YOUR OPINION SHOULD BE A SPECIALIST OF YOUR ORGANIZATION?

Tick several items

20. 20. Be able to plan your working time	1
21. 21. Work with documentation, maintain document flow	1
22. 22. Prepare reports, conclusions, recommendations	1
23. 23. Working with contractual relations (conclusion, support)	1
24. 24. Make operational decisions	1
25. 25. Present and sell services, products	1
26. 26. Develop, describe a business process diagram	1
27. 27. Assess risks (economic, social, etc.)	1
28. 28. Make business plans, business projects	1
29. 29. Calculate financial indicators	1
30. 30. Organize and conduct research in teams, departments	1
31. 31. Know the budgeting module	1
32. 32. Know the management reporting module	1
33. 33. Be able to work with clients, customer base	1

34. 34. Organize meetings, presentations, negotiations 1
35. 35. Be an advanced user specialized. programs (1C, etc.) 1
36. 36. Know the laws and regulations 1
37. 37. Other (please add) _____

_____

BASED ON PERSONAL PROFESSIONAL EXPERIENCE, ASSESS THE QUALITY OF TRAINING OF GRADUATES OF THE FINANCIAL UNIVERSITY (FINACADEMY)

Quality	High	Average	Low	Hard to say
38. 1. Degree of education	1	2	3	5
39. 2. Theoretical knowledge on the profile of the specialty	1	2	3	5
40. 3. Practical training in the profile of the received specialty	1	2	3	5
41. 4. Awareness in related areas of the acquired specialty	1	2	3	5
42. 5. Ability to quickly master the necessary skills	1	2	3	5
43. 6. Striving to develop professionalism	1	2	3	5
44. 7. Striving for new things	1	2	3	5
45. 8. Knowledge of foreign languages	1	2	3	5
46. 9. Computer skills, knowledge of the necessary programs	1	2	3	5
47. 10. Skills of business communication, negotiations	1	2	3	5
48. 11. Diligence, willingness to work as long as needed	1	2	3	5
49. 12. Business mobility	1	2	3	5
50. 13. Willingness to improve qualifications	1	2	3	5
51. 14. Willingness to improve	1	2	3	5
52. 15. Ability to focus on the main thing	1	2	3	5
53. 16. Moral qualities	1	2	3	5
17. Add anything else _____	1	2	3	4

WE ASK YOU TO RATE THE PERSONAL QUALITIES OF FINANCIAL GRADUATES AS YOUNG SPECIALISTS

	High	Average	Low	Hard to say
54. 1. Sociability	1	2	3	4
55. 2. Ability to work in a team	1	2	3	4
56. 3. Organizational skills	1	2	3	4
57. 4. Leadership qualities	1	2	3	4
58. 5. Fast learning	1	2	3	4

59. 6. Stress resistance	1	2	3	4
60. 7. A creative approach to solving tasks	1	2	3	4
61. 8. Rational approach	1	2	3	4
62. 9. Ability to make independent decisions	1	2	3	4
63. 10. Flexibility in dealing with people	1	2	3	4
64. 11. Ambition	1	2	3	4
65. 12. Initiative	1	2	3	4
66. 13. Responsibility	1	2	3	4
67. 14. High organization	1	2	3	4
68. 15. Focus on results	1	2	3	4
69. 16. Ethical conduct	1	2	3	4
70. 17. Striving to develop professionally and personally	1	2	3	4
71. 18. Intelligence	1	2	3	4
72. 19. Analytical skills	1	2	3	4
73. 20. Loyalty	1	2	3	4
74. 21. Patriotism	1	2	3	4
75. Other _____				

WHAT PROFESSIONAL QUALITIES, IN YOUR OPINION, DURING WORK IN YOUR ORGANIZATION, THE GRADUATE OF THE FINANCIAL UNIVERSITY (FINACADEMY) AS A SPECIALIST?

(Tick several)

76. Initiative 1
77. Ability to make independent decisions 1
78. Organizational skills 1
79. Honesty 1
80. Willingness to come to the rescue 1
81. Responsiveness to innovation 1
82. Enterprise 1
83. Tact 1
84. Ability to smooth out conflicts 1
85. Intelligence, benevolence 1
86. Professionalism 1
87. Restraint 1
88. Rationality in decision-making, in the implementation of orders 1
89. Responsiveness 1
90. Referring to foreign experience 1
91. Selfishness 1
92. If otherwise - add 1

WHAT ARE YOU OR YOUR COLLEAGUES NOT SUITABLE FOR IN GRADUATES OF THE FINANCIAL UNIVERSITY (FINACADEMY)? (*Tick several*)

93. Degree of ambition, self-confidence 1
94. Level of professional knowledge 1

95. Certain character traits 1
96. Conflict 1
97. Lack of "sense of proportion" 1
98. High social demands 1
99. Weak motivation 1
100. High salary expectations 1
101. Negligence at work 1
102. Weak discipline 1
103. Self-doubt 1
104. High Criticality 1
105. Own opinion 1
106. If otherwise - add _____

ARE YOU READY TO GIVE SPECIFIC PROPOSALS TO IMPROVE THE PROFESSIONAL TRAINING OF FINANCIAL UNIVERSITY STUDENTS AND INCREASE ITS PRESTIGIOUS IN THE LABOR, EMPLOYMENT AND PROFESSIONAL MARKET?

No offers 1
Yes, there is 2

_____

FIRST, WHAT DO YOU PAY ATTENTION TO WHEN RECRUITING A YOUNG SPECIALIST? *(Tick several)*

107. Name of specialty, specialization 1
108. Availability of work experience in the profile of the company 1
109. Availability of industrial practice, internship 1
110. Grades in the diploma 1
111. Active participation in scientific events 1
112. Appearance 1
113. Social status of parents 1
114. Personal and family ties 1
115. Letters of recommendation 1
116. Referral calls from friends 1
117. Ability to quickly adapt in a team 1
118. Personality 1
119. Other
120. **IN YOUR OPINION WHAT PROFESSIONAL AND PERSONAL COMPETENCES WILL BE DEMANDED IN THE 21ST CENTURY. LIST THEM?**

Thank you for your answers!

From university to labour market in the 21st century: a step forward in work-based placements
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