

## Social and Professional Adaptation of University Graduates in the Labor Market

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The article deals with the problem of adaptation of graduates of higher education institutions in the labor market in modern conditions. Based on the results of questionnaires and interviews with young specialists and employers, factors that influence the social and professional adaptation of graduates of higher education institutions are revealed. The viability of interaction of outcome-based, contextual, problem-based and personality-oriented approaches in the educational process to prepare a competitive specialist who is able to successfully adapt in the labor market is explored.

**Key words:** labor market, graduates of higher education institutions, social and professional adaptation, competences, personal qualities, value orientations.

Social and economic transformation, the integration of Russia into global market, the emergence of new values, led to the fact that the labor market began to demand the specialists capable of quickly navigating in the surrounding reality. At the moment, the nomenclature of jobs is changing very rapidly and the demand for highly qualified specialists is constantly growing. At the same time, every employer is interested in obtaining a specialist who requires a minimum period of adaptation to professional activity. It is supposed that students apply to university to graduate it further as highly qualified specialists. However, in the opinion of the majority of employers, graduates of higher education institutions must be trained directly at the workplace. The process of student's adaptation to the specifics of professional activity can take a fairly long period.

Social adaptation is understood as the process of adaptation of a subject: a person, a community to a social environment, involving interaction and a gradual harmonization of the expectations of both parties. When talking about socio-professional adaptation, we mean the process of adaptation of the individual to the

conditions and norms of new professional activity, mastering of production norms of behavior, professional ethics [1, 2, 3]. When entering a job, a young specialist falls into the system of professional and socio-psychological relations within the organization, assimilates norms and values of professional activity, coordinates his individual position with the goals and objectives of an enterprise [4].

The role of the education system in this situation is to help the graduate to develop qualities that enable him/her to become a professionally wealthy, competitive, active person, able to adapt to the conditions of professional activity in the shortest possible period of time. Therefore, adaptation as a process and adaptedness, as a personal characteristic, becomes fundamental for a young specialist in the process of his preparation and professional activity.

To analyze the degree of social and professional adaptation of graduates to professional work, a survey of young specialists working at the enterprise for no more than 3 years was conducted. In the first place the main interest of the survey is focused in the primary adaptation of the graduate of the university to professional

work. This is the period when appear the most frequent situations associated with the mismatch of ideas and expectations about professional activity with reality, and as a consequence a change in professional activity takes place. Although the status of a "young professional" is not set in the Labor Code, it is valid for 3 years from the date of the employment contract and is not re-assigned. A total of 86 people took part in the survey.

The results of the questionnaire are presented in table 1.

The first questionnaire, proposed to graduates, was drawn up in order to identify their own assessment of how quickly they were able to adapt to the conditions of professional activity, to the profession itself, to the norms and values of the professional team.

According to the analysis of the survey results, the following conclusion can be drawn:

- 70% of the respondents adapted to the standards and values of the professional team, 20% did not have relations in the team, others found it difficult to answer;
- 54% of those who participated in the survey adapted to the conditions of professional activity, 8% found it difficult to answer, the rest answered "did not adapt";
- 48% of the respondents adapted to the specifics of their professional activities, 10% of respondents found it difficult to answer, the rest did not adapt.

Thus, it can be noted that the subjective perception of the adaptation degree by the graduates is at a rather low level. The best results were achieved in adaptation to the team, to the traditions and values that are shared in the team.

Further, the graduates were asked to answer what factors, in their opinion, can help to go through the adaptation process

**Table 1. Self-assessment of the process of social and professional adaptation of graduates**

Object of Adaptation (To which the graduates adapted)	Graduates (% of the total number of respondents)
<b>To the conditions of professional activity</b>	
Adapted	53
Difficult to answer	8
Not adapted	38
<b>To the profession</b>	
Adapted	48
Difficult to answer	10
Not adapted	42
<b>To norms, values of the professional team</b>	
Adapted	70
Difficult to answer	10
Not adapted	20

successfully. The list of factors had to be ranked according to importance, by placing the most important factor to the first place. The questionnaire and the results of the survey are presented in table 2.

Factors that have a value of 50% or higher, we will consider as the most significant, the factors of primary importance, the "first priority". Factors noted by 30% to 49% of respondents, as secondary, less significant, "second priority". The factors noted by less than 30% of respondents are considered as the "third priority".

Thus, according to the graduates the most important factors contributing to adaptation in the labor market are "the availability of work experience" and "the availability of professional competencies".

The second group includes such factors as the "availability of certain personal qualities" (49%), the "ranking of the institution that issued the diploma" (38%) and "Links, contacts" (36%). It should be noted that the last two factors are almost equally estimated by graduates. The respondents attribute to insignificant such factors as "absence of family, children", "age", "gender".

**Table 2. Factors of socio-professional adaptation (% of interviewed)**

Factors of social and professional adaptation	Graduates
1. Availability of work experience in this field	63
2. Availability of competencies	98
3. Availability of certain personal qualities	49
4. Ranking of the institution that issued the diploma	38
5. Links, contacts (help from relatives, friends)	36
6. Lack of family, children	19
7. Age	16
8. Sex	8
9. Other	3

The hierarchy of adaptation factors generated by the interviewed graduates suggests the "existence of experience in this field of activity" and the "availability of good knowledge" among the primary factors, as well as the "availability of certain personal qualities". Provide with all the necessary factors is precisely the aim of properly organized system of higher education, as well as the desire and aspiration of the student. For example, the "availability of professional competencies" can not be replaced by relatives or acquaintances. You need to acquire all the skills yourself. This means that professional experience and the availability of professional competencies prevail among the qualities required by applicants for employment, as well as "certain personal qualities" will help a young specialist to adapt more quickly to the norms and values of a professional team, and should not be dismissed in a career building.

At the next stage we decided to find out the employers' opinion on the factors that do not allow a young specialist to successfully adapting to the labor market. Employers were asked to note what factors, in their opinion,

prevent successful adaptation of a young specialist. A total of 103 employers took part in the survey. The results are shown in table 3.

The opinion of employers almost coincides with the opinion of graduates. According to employers lack of work experience and competencies in the first place do not allow a young specialist successfully and quickly adapt to the labor market. Employers also note the poorly formed personal qualities of a young specialist. Most employers believe that young professionals have poor communication skills, organizational skills, that is, the ability to work in a team, responsibility and efficiency.

Based on the results of the conducted

research, it is possible to outline the following components of successful adaptation of the graduate in the labor market (fig. 1).

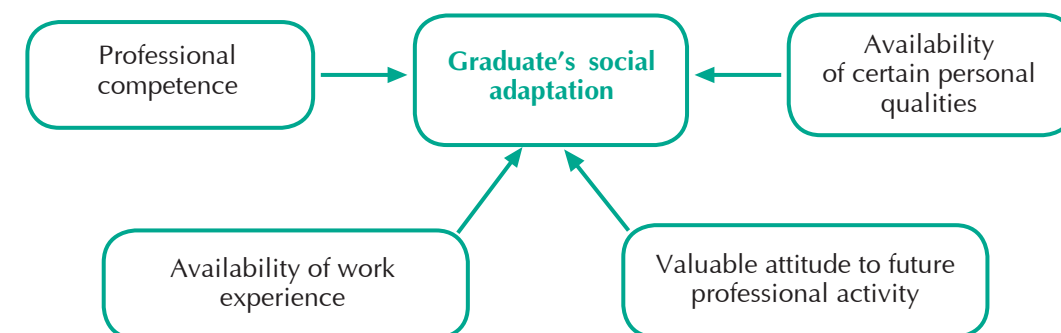
Below we will consider each component in detail.

Many researchers note that the content of training still remains focused on theoretical knowledge, and, mainly, without practical application in real activity [5, 6, 7, etc.]. The need to bring back the system of mandatory internship is declared by the organizers of education [8]. Verbitsky noted that the knowledge, abilities and skills acquired in the learning process should be transformed into means of solving problems in real professional activity [9].

**Table 3. Hierarchy of factors that make it difficult to adapt to the labor market of graduates, in the opinion of employers (% of interviewed)**

Factors	Employers
1. Lack of experience in this field	70
2. Lack of links, contacts	0,9
3. Lack of competencies	100
4. Lack of certain personal qualities	62
5. Sex	7,9
6. Family, children	23
7. Age	2,9
8. Ranking of the institution that issued the diploma	11,6
9. Other	3,8

**Fig. 1. Factors affecting socio-professional adaptation**



One of the main requirements of employers to graduates today is the availability of work experience. The solution largely depends on the effectiveness of internship experience. However, in our view, practical training, especially in the period of shortening of theoretical training and increasing the share of independent and practical work at universities, can not be considered in isolation from the theoretical preparation of students. On the contrary, practice is a logical continuation of theoretical training, and theoretical preparation should be the foundation, the basis for solving practical problems. To implement the requirements articulated in the educational standards, both theoretical and practical training are necessary.

Today participation of employers in the process of forming the basic educational programmes of universities becomes an indispensable condition of the educational process. In this regard, the university and the department actively interact with employers in line with their training profile. Student internship is the most traditional way of interaction between universities and enterprises.

As follows from our analysis of existing standards, they only define the types of internships, but do not specify the content of practice, the form of realization, the requirements for the facilities, and so on. In our opinion, the internship should become one of the priority areas in the educational process. The professional growth of students as future competitive specialists directly depends on the effectiveness of the organization, content, forms and methods of professional training of students in framework of their hands-on practice at different stages. Each stage of internship should be the final stage of training on the relevant course and serve as a basis for the student's transition to the next level of training.

The orientation toward solving the practical problems of forming professional competence forces us to reconsider (in the context of the concept of modernization of education) the change in the main

components of the internship: its purpose, content, the criteria for the effectiveness of forms and methods of instruction, the student's functions at different stages:

- **The purpose** of the internship in relation to the problem of development of professional competence means that students in the process of hands-on practice have not only to learn the material based on specific activities, but to expand and complicate their individual intellectual resources by means of practical activity.
- **The content** of the internship. The content of the internship should be selected and organized in such a way that students can test all the activities of the future profession with the aim of developing certain competencies that form the basis of professional competence.
- **Criteria for the internship effectiveness.** All forms and methods of organizing the process of hands-on practice should be oriented towards the formation and development of professional competencies and personal qualities. As a criterion for assessing the effectiveness of the practice, not only the indicators of competency formation will appear, but also the experience of solving specific practical problems in the sphere of future professional activity.
- **The student functions** within internship. The functions must correspond to the real functions of a specialist. Within the internship experience students have to realize the function of designing the course of individual intellectual development as future professionals. Accordingly, such forms of student activities that contribute to the formation of certain competences come on the foreground [10].

The internship should be considered as a logical continuation of the previous theoretical preparation, and should include (along with a standard report) the execution

of a project prepared in advance by a student (system of interrelated mini-projects) under the supervision of the teacher responsible for internship, as well as creative tasks to solve specific practical tasks related to the future sphere of professional activity, etc.

With such an organization, internship becomes a link between theoretical preparation and subsequent practical activities of students - the prerequisite for successful social adaptation to future professional activity is the basis for the formation of professional competence.

Competencies are determined by the content of professional activity. Their set is indicated in the standards, as well as in the social demand. To identify the competencies needed by the employer, we analyzed educational standards in the economic field of training. All competencies were systematized into groups. The result was used to design a questionnaire and conduct a survey among employers in order to identify the competencies required by young professionals for practical, professional activities. A total of 46 employers from commercial organizations and government agencies participated in the survey. The list of most significant competencies that contribute to successful adaptation includes: communicative, research, organizational, information competence.

In addition to the availability of certain professional competencies of the university graduate, his social and professional adaptation depends on the availability of certain personal qualities.

Experts in the process of professional activities perform not only professional, but also social roles. In the employment process, adaptation and further career development they constantly interact with representatives of various professional and social communities. Their social and professional success largely depends the way they impress others and efficiency of their communication system. To study the influence of this factor on the adaptation process, we also developed a questionnaire that offers employers to choose from the list of various personal qualities those qualities that

will allow young specialists to quickly adapt and engage in professional activities. Based on the questionnaire results we found out that in the employers' opinion such qualities as responsibility, diligence, self-control, the ability to work with information, the ability to defend one's point of view, initiative are necessary for graduates for successful adaptation and further professional career development.

The effectiveness of the social and professional adaptation of the young specialist is also dependent on his valuable attitude to the future career.

The main purpose of higher education is to involve students in the future professional activity. Accordingly, the improvement of the educational process can and should take into account the assimilation of the individual values of their future professional activity. As J. Raven noted the formation of a professional primarily relates to a problem of forming a personality of the future professional, therefore an individual competence growth should be continuously connected to the system of values [11]. In our opinion, this happens because in the process of training not enough attention is paid to the formation of the valuable attitude to their future profession.

If graduates have professionally significant value orientations, it provides conscientious attitude towards chosen profession and desire to be engaged as soon as possible in professional activities.

In this regard, in the training process of future professionals it is necessary to find and implement such approaches in the organization of the educational process, which would provide the conditions for professional adaptation, personal development, the ability to compete effectively and realize their potential, taking into account the labor market needs. As a fundamental approach for the implementation of these requirements, we selected the competence-based approach.

This approach involves active participation of students in the learning process, as opposed to passive assimilation of information. The learning outcomes focus

on the development of general cultural and professional competencies. This approach suggests that the educational system does not focus only on providing students a certain amount of knowledge and skills, but on developing a holistic set of key competencies.

However, the formation of professional competence will be effective only if the educational process is close to the real professional activity. Bring the educational process closer to the real professional activity becomes possible by the implementation of the contextual training approach.

Provide an individual with knowledge that will enable him to carry out a successful operation for a long period of time becomes more and more difficult. Recently the main value is not the knowledge, but awareness or understanding about where and how to apply this knowledge. And even more important is the knowledge about how to extract information, to integrate, or create [12, p. 66]. The first, the second and the third are the results of activity, and one of the most important elements of educational activity is to solve problems. Different tasks and problems are an essential component within contextual training approach, since in the problem solving process one can acquire and master modes of operation needed in future career.

In this perspective an active introduction context-oriented tasks and assignments to the learning process becomes vital at university. Students in the process of solving problems and tasks is placed in the activity-position and gets the practice of using the educational information in a simulated professional activities [13]. This further allows to significantly reduce the period of adaptation of the young expert in the enterprise and ensures its natural entry into professional employment. However in a real life, graduates have to deal with all sorts of tasks. There are tasks that can be easily solved following previously studied algorithm, but there can arise problems that require analysis, synthesis, and more.

Tasks and problems have a common nature – a problem situation. An individual involved in this situation becomes aware of the challenge, this enables him to generate new knowledge that will allow him to find a way to resolve this challenge. M.L. Zueva notes that as a rule when solving the problems students use the algorithms that the teacher showed them. However, in practice it can often lead to the fact that graduates are unable to solve the problem with the modified conditions [14].

Thus, for the formation of students' ability to solve problem situations requires problem-based learning. The main aim of this approach – is the development of students' ability for independent work, formation of research skills, and development of cognitive and creative abilities.

In the current context, ability to solve problems is highly valued by employers. The importance of such skills is explained by the fact that employers are interested in employees who are willing to take responsibility and to work independently.

To do this you must be able to identify the problem and offer its solution, this is the key problem-solving skill. Ability to solve problems is an important aspect of quality management - the concept of continuous improvement is based, primarily, on a person's ability to analyze operations, identify problems and find ways to improve. In the process of resolving problem situations a student develop personal qualities such as the ability to work in a team, responsibility, communication, research, and information competence.

Therefore, problem-based learning plays an important role in social and professional adaptation of young specialists in the company. Problem-based learning may also be implemented within internship period.

In addition, problem-based learning, the desire to solve the problem generates interest of students to the subject, and enhances their motivation to study.

Student-centered approach plays an equally important role in the social and professional adaptation of young

specialist. It recognizes the uniqueness of the subjective experience of each student, as an important source of individual life activity, and particularly in learning activity. This recognizes that education does not mean just mastering of certain pedagogical influences by the students, but also a way to meet intended and subjective experience, to ensure its enrichment, transformation, being a "vector" of individual development [15]. Student-centered approach is considered today as a specific pedagogical activity, which creates favorable conditions for students, contributing to the development of their abilities, initiative, independence, self-development [16].

However, each of the considered approaches together with the positive also has negative sides. That is why applying

the best components of each approach approaches in interaction can enrich the content of the educational process.

According to the labor market requirements university graduate should be a fully developed personality, and have not only a certain set of competencies, but also necessary personal qualities, to be able to adapt quickly to rapidly changing conditions and solve arising professional problems.

In order to form this kind of graduates with the required competencies, personal qualities, ability to solve problems and value attitudes to future professional activity, ability to adapt quickly to the changing conditions, norms, values and specific professional activity it is necessary to apply a combination of competence, context, problem, and student-centered training.

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## Professional Culture as Basis for Engineering Masters' Professional Activity

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Today, the enhancement of engineering master's competitiveness requires a cultural ground. The article justifies that the formation of a cultural ground is achieved through the development of a professional and project-oriented culture, as well as a scientific and methodological culture of master students within the process of engineering education. Both professional and project-oriented, and scientific and tutorial cultures are presented in the article as important qualities of engineering master students; their structural components are identified taking into account future masters' professional activities. The inability of the existing pedagogical models to solve the identified problem sets a task of developing two basic models: a model providing focused development of a professional and project-oriented culture and a model for the development of a scientific and tutorial culture of engineering master students.

**Key words:** master student, engineering education, professional culture, model simulation.

Modern practice shows that in order to raise the competitiveness of an engineering master graduate a certain cultural basis of his/her professional activity is needed. Today, professionals in any sphere develop their own professional competences, knowledge, skills, abilities and expertise to assure their own competitiveness based on a sufficient level of a professional culture. Besides, the new concept of Russian education that correlates with the formation of a competitive and developed personality is based on the principle of gaining knowledge, skills and abilities in the context of an integrated panhuman culture [1, 2, 5]. These conditions define the importance and topicality of the problem of developing a professional culture as a foundation for future professional activity of engineering master students [3, 7].

The scientific data analysis has led to a conclusion that the professional culture

(in particular the project, scientific and methodological ones as professional characteristics of a master's personality) is a certain way for realization of his/her professional career.

Project-based learning plays an important role in training master students for their professional development [4; 8]. Project design is a practical tool for communication [4, 8]. Professional project-based culture of master students is seen by the authors as a comprehensive framework of a person that consists of an integrative system of social, professional and personal characteristics built upon interconnected and interdependent constituents (axiological, cognitive, pragmatic, behavioral), which, in their turn, are formed based on the system of values of professional self-development. This system of values appears as an imperative for the professional competency of engineering master students (Table 1).



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