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Formation of Competencies in Higher Education by Bachelors and Masters

Formación de competencias en educación superior por licenciados y magisters

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RESUMEN

En los últimos años, en la educación superior, ha habido una transición hacia un modelo de educación basado en competencias, cuyo propósito es la formación de una persona social y profesionalmente competente. La integración de la educación superior en la investigación es la idea principal del enfoque basado en competencias. Tal modelo para la formación de competencias de investigación en una licenciatura / maestría, debe ser la base para crear un sistema efectivo y desarrollar competencias profesionales y habilidades de investigación.

Palabras clave: Enfoque basado en competencias, competencias profesionales, Competencias generales culturales (GCC-3), Estandares educativos de educación superior del estado federal (FSES HE 3 ++)

ABSTRACT

In recent years, in higher education, there has been a transition to a competency-based model of education, the purpose of which is the formation of a socially and professionally competent person. The integration of higher education in research is the main idea of the competency-based approach. Such a model for the formation of research competencies of a bachelor/master should be the basis for creating an effective system for the development of professional competence through the development of research skills, the realization of creative abilities, improving the quality of education.

Keywords: Competency-based approach, professional competencies, General Cultural Competencies (GCC-3), Federal State Educational Standards of Higher Education (FSES HE 3 ++)

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INTRODUCTION

In Presidential Decree No. 204 of May 7, 2018, "On National Goals and Strategic Tasks of the Development of the Russian Federation for the Period until 2024", one of the most important tasks was the need to form an effective training system, including through digital technologies. To accomplish the task, the Government of the Russian Federation developed the national projects "Education" and "Science".

Unfortunately, developers of educational programs with great difficulty switch to the language of competencies and learning outcomes and, as a rule, despite the right to independently determine the set of disciplines/modules in the curriculum, traditionally leave their list unchanged. The decisions made are based on the qualifications of teachers and not the need to review the competency-based approach to the formation of given competencies among students.

Research work is considered as a strategic means of continuously improving the quality of educational training of students in the conditions of two-level professional education, including as strengthening the scientific potential of the university, creating a talent pool.

The development of the scientific potential of an individual is a complex long-term focused process of forming the skills of independent work, deepening the knowledge base, both in the field of interests and in the field of specialization, with the aim of developing a sustainable need for creative search. A large role is played by the higher school and the teaching staff of universities, which are ready to plan extracurricular activities of students. Moreover, it should be reflected in the plans along with lectures and seminars. At the same time, "online education does not pretend to replace traditional education, but supplements it, helping students get more accessible information. In addition, professors have more time for 'live' communication with students in the framework of practical and laboratory studies and, most importantly, in science. After all, a university teacher is not only a carrier of knowledge, but primarily its creator" (Kotyukov: 2019).

METHODOLOGY

In the course of the study, theoretical methods (analysis, synthesis, classification) and empirical methods (observation, comparison) were used to assess the federal state educational standards of higher education and higher professional education (GCC-3 (General Cultural Competencies), FSES HE 3 ++ (Federal State Educational Standards of Higher Education) of the Ministry of Science and Higher Education of the Russian Federation and the competency-based approach.

RESULTS

Given the continuity of the educational process, the integration of higher education and research work, we consider it appropriate to separate research competencies at different levels of the education system. The mechanism of forming the competence of a bachelor-researcher and a master-researcher is the consistent achievement by a person of a higher level of development in the process of solving professional problems in accordance with the types of professional activity and the profile of training (Khakhonova: 2019; Federalnyi gosudarstvennyi obrazovatelnyi standart: 2010, 2018).

When preparing a Bachelor's degree, the task is to form competencies on the basis of general secondary education that allow a person to realize themself most fully and productively in specific types of professional labor activity, in market conditions, and correspond to qualifications and profile. Achievement of these goals is possible only by applying interdisciplinary-integrated requirements to the result of the educational process. In the field of research, it is expressed in the direct participation of bachelors in conducting basic and applied research at the planning stages: collection, processing and analysis of data; preparation of reviews, annotations, reports, analytical notes; professional publications, presentations with messages and reports.

When preparing a Master's degree, the development of research competencies takes place at a qualitatively new level and is expressed in the transition to free scientific research, relying on the existing competency base formed based on the first stage of professional education. It is supposed to master the culture of scientific research and obtain scientific results, where ethical standards of professional behavior are observed, an adequate assessment of personal participation in the development of science and society as a whole, and a contribution to the ongoing sociocultural process at the micro, meso, macro and mega levels are made. Here, the formation of an individual mentality of the personality should take place – stable, deep foundations of the worldview, value structures and behavioral models that give the scientist's personality a unique property combined with openness for the continuous enrichment of their own mental characteristics and abilities for comprehensive self-realization.

Research competencies are expressed in the ability to independently formulate goals, set specific tasks of scientific research in the fundamental and applied fields of sociology and solve them using modern research methods using the latest Russian and foreign experience using modern equipment and information technologies.

When preparing a master's degree, emphasis is placed on the ability to master new theories, models, research methods, as a result of which skills are formed to develop new methodological approaches considering the goals and objectives of the study.

In terms of presenting the results of research, one expects the manifestation of the ability and willingness to professionally compile and issue scientific and technical documentation, scientific reports.

The competency model of the bachelor/master is a description of the set of competencies inherent in each level of education. Thus, competencies act as the goals of the educational process and competency – as a result, a set of personal qualities of a specialist.

DISCUSSION

To separate the general and individual in the content of education based on the competency-based approach, the concepts "competence" and "competency" are used. The first is understood as a set of interconnected personality traits set in relation to a certain circle of objects or processes and necessary to act qualitatively and productively in relation to them. The second is defined as the person's possession of the relevant competence, including their personal attitude to it and the subject of activity (Semenova: 2018).

The competency-based approach allows one to create a cross-cutting model of a specialist that harmonizes the interests of the individual and society and to build a system of advancing translation of labor market requirements and the demands of society in the educational space. Only by continuously adjusting the professional image expressed in terms of competencies and translating this correction through a system of criteria in the form of a goal for the education sector can one "accustom" the structure of education to constant updating and self-improvement. This broadcast should be carried out through a system of state educational standards (Baidenko: 2005; Troianskaia: 2016).

We offer a set of research competencies that are necessary for research work in the process of training a professional with higher education and further scientific and practical activities. For this, it is advisable to highlight the general and professional competencies of the bachelor-researcher and master-researcher.

General competencies (basic, key, universal) include abilities based on knowledge, experience, values and inclinations that are acquired in all types of educational practice; knowledge of methodology and terminology from individual areas of knowledge.

The general competencies necessary for professional and scientific activities, are to be divided into instrumental, interpersonal and personal.

Instrumental competencies (having a psychological basis and instrumental function) include cognitive abilities, such as understanding and using ideas and thoughts; methodological abilities: organization of time,

decision making, choice of study strategy, etc.; technological skills (including the use of various technical means and working with a computer); linguistic skills.

One of the integral components among the basic instrumental competencies is information competence. Its content includes the possession of specific skills in using various technical devices and computer technologies, the ability to extract information from various sources, present it in a generalized form and use it effectively; development of skills of analytical processing of information; knowledge of the features of information flows in their subject area, etc.

Considering instrumental competencies from the point of view of the activity approach, in which the initial method of studying the psyche is the analysis of transformations of the mental reflection of the personality in the process of activity, we subdivide them into the following groups:

- competencies in the acquisition of knowledge;
- competencies in anticipating results, building a hypothesis;
- competencies in the selection of optimal solutions to the problem and their implementation;
- competencies in the critical assessment and explanation of the results.

Interpersonal competencies reflect social skills and the ability to implement them in research activities. The ability of a researcher to work in a team, correctly build interpersonal relationships and show commitment to social and ethical requirements depends on the degree of formation of interpersonal competencies. The ability to form interpersonal competencies largely depends on the physical, mental, intellectual and volitional characteristics of a person, which expand or narrow the range of choice possibilities and, accordingly, the range of development of personality's communicative potentials. The communication competence of the individual determines the effectiveness of its inclusion in the processes of sociocultural communication, acting as a necessary and sufficient condition for actualization and implementation by the subject of various cultural functions in society. Here, we include leadership qualities, creativity, the ability to work independently, the desire for success, initiative, entrepreneurial spirit and a number of others. Given that the above competencies relate to the integrative qualities of the individual, we propose to define them as personal.

Along with general ones, professional competencies are distinguished, such as willingness and ability to act expediently, solve problems independently and evaluate the results of one's activities.

Professional competencies are instrumental in nature, which allows one to perform a number of actions or show certain personality traits: logically and consistently present the acquired knowledge in a certain field; contextualize new information and interpret it; demonstrate the ability to search for information through library funds, computer systems of information support, periodicals, as well as have the ability to understand the results of experimental and other methods of testing scientific theories; make an original contribution to the subject area, etc.

In the works of I. Ia. Lerner, V. V. Kraevskii, M. N. Skatkin, P. G. Shchedrovitskii and their followers, the orientation of education towards the development of generalized methods of activity is clearly traced. However, the achievements of scientists did not become the basis for the development of state educational standards for higher professional education of previous generations, standard curricula, control systems, etc. According to the famous teacher V. I. Baidenko, such a strict orientation of the education system solely on results "narrows the mission of higher education, its ethical and spiritual functions, its focus on the development of personality, preservation, inheritance and development of the value 'core of the nation'" (Baidenko: 2005, p. 29).

CONCLUSION

The system of professional standards should have contributed to the solution of the task. To date, more than 1,260 professional standards have been developed and approved, containing the composition and characteristics of labor functions and the necessary professional competencies (knowledge, skills and actions) for their implementation. However, despite a number of measures taken by the Ministry of Science and Education of the Russian Federation, the quality of Russian education leaves much to be desired. There are problems with the development and implementation of the Federal State Educational Standards of Higher Education on the part of the mandatory requirement for the formation of graduates of educational programs for the training of professional competencies.

At the present stage, when education is turning into the main strategic resource for the development of both society as a whole and a single person, it becomes necessary to create scientifically-based partnership technology for all subjects of educational activity. At the same time, scientists must possess all the skills necessary to support business development. In the new economic conditions, it is necessary, using Russian and international experience, to form an effective system of mutually beneficial partnerships between universities and business. A nationally oriented part of Russian business that connects its destiny with Russia begins to understand its own social responsibility and demonstrates an interest in the development of Russian higher education.

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