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MECHANISMS OF PROFESSIONAL COMPETENCE DEVELOPMENT OF FUTURE ENGINEERS IN HIGHER EDUCATION INSTITUTIONS

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Abstract: Proper organization and systematization of the educational process is important for each growing young generation to become mature specialists. New educational technologies and interactive methods in educational institutions serve to make students spiritually mature and mentally healthy. Therefore, this article talks about advanced mechanisms and technologies for developing professional competencies of future engineers in higher education institutions.
Key words: Qualification, competence, theory, methodology, analysis, education, technology.

In our country, measures to raise the higher education system to a new level, to improve the quality of education based on advanced international standards, and to increase the coverage level of higher education are being developed and implemented on a large scale. . Address of the President of the Republic of Uzbekistan to the Oliy Majlis dated January 24, 2020, in order to fundamentally reform the education system and train competitive specialists at the level of national and international labor market requirements, to use modern knowledge and pedagogical technologies that make a significant contribution to the socio-economic development of our country

Systematic measures have been set to further improve the education sector by training highly qualified specialists with skills and introducing advanced educational technologies to the sector [1.25]

At present, great attention is paid to the teaching technology in the formation of professional competence of specialists. The teaching technologies developed and used by the teaching staff of higher education institutions are a component of the educational system for determining and training the professional competence of the future specialist, and for the initial creation of the professionally significant basis for acquiring the profession, professional helps to gradually form theoretical, practical and motivational preparation and ability to perform activities at a high level. The structure and content of professional competence consists of two main components. Professional competence is a combination of knowledge, skills and experience, and design is a factor in the implementation of the activity of a specialist.

Today, the educational system is faced with a very difficult problem, which is being solved by researchers in different ways, which is the content of the concept of competence and its limits, the size of its parts. Three main groups of competence are distinguished from the above points:

1. Competencies relating to oneself, as a person, as a subject of life activity.
2. Competencies related to human interaction with other people.
3. Competencies related to all types and forms of human activity

Thus, the competence-based approach to education creates new types of educational results.

The following personal qualities are necessary for a person to perform his professional activities: creativity, technical thinking, confidence in his own strength, continuous improvement of his professional skills, the ability to manage processes with emotional and firmness, the results of the emergence of competence . Thus, when we determine the essence, content and structure of professional competence of a specialist, we will have the basics of studying the professional competence of teachers of vocational education. However, psychological and pedagogical conditions are also important in the formation of professional competence of a specialist.[2.43]

The formation of the professional competence of engineers depends on their place in society, their obligations and tasks in their work, and their individual abilities. The creative individuality of an engineer is determined by the level of development of his individual characteristics (scientific thinking, creative approach to work, striving to realize his potential, etc.). The psychological-pedagogical conditions for the development and improvement of the creative individuality of future engineers are manifested in the formation of professional qualities such as originality and expediency, and to find a solution to them. A modern creative specialist realizes not only his identity, but also his life goals when choosing one of the reproductive (depicting what is remembered) and creativity methods of activity. He changes himself qualitatively, overcomes psychological obstacles, looks for opportunities to develop his professional qualities, develops his own pedagogical concept. In general, for the professional activity of an engineer, firstly, innovative orientation, secondly, creative approach to one's work, individuality are very important. A creative engineer correctly understands that it is impossible to achieve a high position in professional activity without self-improvement, without developing individuality, without forming professional competence. For this reason, it is impossible to master new technologies without developing the necessary professional qualities as a vital goal. These two directions can be taken as an indicator of the creative individuality of the engineer. The style of the future engineer is a means of self-expression by a person in the form of a system of harmonizing his individuality with the conditions of professional activity, a source of personal creativity and a result of creative activity.[3.112] In the individuality of an engineer, it is possible to distinguish a psychological and a personal aspect. Their engineering activity is determined by the level of manifestation of general and professional abilities, as well as professional motivation. The wider the range of sufficiently developed abilities, goals, and needs, the higher the professional skill level of the specialist.

The main conflict that ensures development in the professional activity of engineers is determined by the gap between human abilities and the requirements of engineering activity. Conflicts arising in the engineering process are solved by each specialist at the level of his capabilities and abilities. This activity defines the individual style of the engineer.

Recently, the concept of "competence" has been widely used in the psychological and pedagogical literature, in the scientific works of many pedagogic scientists. The competence approach to the education system began to take shape in foreign literature in the 60s of the last century.[3.135] The concept of "competence" is an ever-growing classification of a person, the ability to solve problems in real life situations, to mobilize one's own knowledge, educational and life experiences, values and interests.possibilities. The term "competence" entered the field of education as a result of the scientific research of psychologists. This concept is how to behave in unconventional or unexpected situations, how to communicate, how to take a new path in interactions with opponents, how to perform ambiguous tasks, how to use conflicting information, how to always develop and complex processes. shows the need for theoretical knowledge about how to act.[4.56]

According to the tradition formed in Western countries, the professional qualification of a specialist is measured by his competence, and the educational system is measured by the level of knowledge, skills and qualifications.

In foreign countries, in accordance with tradition, specialty (qualification) standards are developed, which are considered to be a characteristic feature of the worker's knowledge and skills. This standard only records the result (what should be achieved).

Competence requires a person to constantly enrich his acquired knowledge, to learn new information, to feel the demands of today and the times, to search for new knowledge, to process it and to apply it in his practical work. A competent specialist knows how to use the methods and

methods that he has mastered in solving problems, which are suitable for this particular situation, he can selectively use the methods that are suitable for the current situation, he can reject those that do not fit the problem, acquires skills such as critical thinking.

Getting acquainted with the content of theoretical sources, studying the activities of educational institutions and analyzing the evidence showed that there are a number of contradictions in the formation of professional competence of teachers of vocational education, in particular:

- between the level of mature specialist education of a graduate of a higher educational institution and the normative requirements for the modernized content and volume of the State Education Standard and the level of realization of his personal capabilities;
- between traditional and innovative methods used in the process of formation of professional competence of engineers in higher educational institutions;
- between the activities of higher educational institutions aimed at pedagogical support in the formation of the engineer personality and his professional competence, and the mechanism and legalities of the development of the process of training engineers as future engineers;
- between the fact that the possibilities of integration of the pedagogical series of sciences with general professional and specialized sciences are not sufficiently used in order to form the personal and professional competence of engineers;
- it is possible to point out the contradictions between the scientific and technical development, the increasing demands of the modernized society towards a skilled pedagogue, and the fact that engineers are not ready to work in the conditions of self-development of the main part of the formation of their professional competence. [5.45]One of the ways to overcome such contradictions is the formation of professional competencies of future engineers. By forming the professional competencies of future engineers, creating the necessary pedagogical conditions for ensuring their professional and personal development in educational institutions, modernizing the content and structure of training engineers, determining their psychological and pedagogical conditions, and developing a mechanism for monitoring and evaluating its quality. defines the main goal of competence formation [5.73]An important factor for improving the educational process is closely related to the formation of professional competence of specialists at a high level in the educational system. Therefore, it is determined that one of the urgent tasks is to create the theoretical and practical foundations of the process of forming the professional competence of engineers based on the effective use of the opportunities of modern educational technologies and the created educational methodological complexes.In this regard, the scientific justification of new approaches that ensure the level of professional competence required during the training of engineers at a higher educational institution has become an urgent task.[6.27]In conclusion, it can be said that the direct study of the content of education in practice in foreign countries regarding the professional training of specialists has shown that in Western countries the main place is occupied by the level of competence of the specialist. According to the essence of the national education system of our republic, the minimum requirements of the content of education are based on knowledge, skills and qualifications and are expressed by students' perfect acquisition of this knowledge and their ability to apply it in professional activities.

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