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LINGUISTIC AND METHODOLOGICAL BASES OF IMPROVING THE PROFESSIONAL COMMUNICATIVE COMPETENCE OF PHYSICS STUDENTS IN ENGLISH CLASSES

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Abstract

The professional competence of a specialist is a complex structure of a person, which determines his activity, and is a combination of general cultural, professional knowledge, skill, skills, professional creative approach, social orientation of a person, in general, the effect of professional tasks, which provides a solution. According to its essence, the professional competence of a specialist consists of knowledge: functional (knowledge of the principles of organization of various fields of science), practical knowledge of action (methodical and technological) and the individual's own knowledge. This article discusses linguistic and methodological basis of improving professional communicative competence of physics students in ESP teaching.

Keywords: *professional competence, future physics specialists, the content of the professional training, knowledge, skills, higher education*

Introduction

In the current period, the rapid development of science and technology requires specialists to update and expand their knowledge independently and regularly.

In fact, in the introduction of the updated education system, it is an important requirement of today that every future specialist should have the ability to form professional competence in his field and consistently apply it in his field activities.

The fundamental improvement of the quality of training future physics specialists is directly related to its content. In order to significantly increase the quality of training of future specialists in the field of physics, it is necessary to provide a synthesis of knowledge related to specialization, specialization and other general education subjects specified in the curriculum. The integration of future professional training of personnel in the field of physics, based on changes in the fields of science, education and technology, serves to ensure the effectiveness of the educational process. This process creates the need to make certain changes in the creation of the technology of substantiating the content of the training of these personnel and the formation of their professional competence.

Materials and Methods

A number of scientific works are devoted to the study of the problem of formation of professional competence of future physics specialists. However, the interest of scientists in various aspects and aspects of this problem is not decreasing, which testifies to the special importance and relevance of the modernization and development of the continuous education system at the current stage.

In particular, a graduate of a higher educational institution with a specialist qualification in the field of physics: be ready to carry out pedagogical activities in accordance with the requirements of state educational standards, use modern teaching technologies that ensure a high level of theoretical and practical training, participate in the development of educational programs, their curriculum and training to be responsible for its full implementation in accordance with the process, to organize the control of the knowledge, skills and qualifications of learners, to prepare them for the application of the acquired knowledge in practical activities and to control the independent work of learners, to create a base for the teaching-methodical equipment of specific educational subjects; must participate in the scientific-methodical activity of the educational institution, perform the duties of a class leader, organize and conduct educational work with students, ensure the implementation of educational plans and programs, ensure educational discipline, observe the rights and freedoms of students, improve their professional qualifications.

In the qualification description of specialists in the field of physics, the content of the training of bachelors in the field of education is mainly expressed by the active-creative aspect of the future physics teacher's knowledge and it implies the experience of comprehensively solving the professional tasks of secondary general education.

Based on the understanding that professional competence is based on reflecting the activity of a physics specialist and the important characteristics of its internal structure, the structure of professional competence can be clarified in terms of describing its main components.

In relation to pedagogical activity, the approach of separating its components as relatively independent functional types of pedagogic activity prevails.

According to V.A. Slastenin (2002), one of the researchers, the training of specialists in the field of physics involves the training of the following tasks: analytical-reflexive, constructive-prognostic, organizational, evaluation-information, correction-verification. The point of view taken by the author, in our opinion, reflects to a large extent the preconceived notions about the structure of the work of a physics teacher.

The research of the structure of the professional competence of the future specialist implies a careful analysis of the work of the pedagogue, the determination of the requirements for his level of preparation set by the secondary general education system in the conditions where the concept of continuous pedagogical education is currently being modernized.

The consistent implementation of the activity approach based on the work of psychologists such as Vygotsky (1966), Leontev (1959), Galperin (2003), as the goal of education in higher educational institutions, envisages the training of professional training in the performance of certain activities in the subject of education. In that case, the main result of teaching in non-philological higher educational institutions will be the formation of students' knowledge of performing professional tasks and solving activity issues. Such a setting of the problem requires a different approach to tools, methods, and the knowledge of the teacher who is carrying out education of a certain type of activity in students.

To develop the ability of students to make clear decisions in pedagogical and production problem situations in the formation of the professional competence of physics students, to have the opportunity to receive information on specialization, general professional and other general education subjects in the curriculum of the educational direction, to develop problem situation tasks on the basis of achieving interdisciplinarity systematization, the use of new forms of education in improving the quality of the teacher training system, ensuring interdisciplinarity and continuity in mastering knowledge related to fundamental, in particular, specialty, general professional and general education-

al subjects, interaction of specialty, general professional subjects with humanitarian, socio-economic, mathematics and linguistic subjects as it is a multifaceted problem, it requires scientific justification of its theoretical and practical aspects.

Thus, the use of the mechanisms described above in the practice of teaching specialty and general professional subjects in a higher educational institution provides an opportunity for the formation of professional competence, as well as the creation of psychological-pedagogical conditions that help the professional direction of students' activities.

According to the tradition formed in the 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 a specialist's knowledge and skills. This standard only records the result (what should be achieved).

Competence requires constantly enriching one's knowledge, learning new information, feeling the demands of this day and age, the ability to search for new knowledge, process it and apply it in one's practical work. A competent specialist has the ability to use the methods and methods that he has mastered in solving problems, which are suitable for this situation, to selectively apply the methods that are suitable for the current situation, to reject those that are not appropriate, to look at the problem with a critical eye.

The issue of the competence approach in pedagogy is not a completely new phenomenon, but its tributaries exist in continuously developing educational processes, which were formed step by step. According to D.L. Thompson, D. Pristin "Professional competence is the sum of knowledge and all ethical rules needed at work." Grishina (2004) assesses professional competence as the extent to which a person has mastered his professional activity and defines it as follows:

– his attitude to this activity, his need and interest in it, aspirations, values, purpose of the activity, imagining his social position;

– to assess one's personal identity and position as a specialist, professional knowledge, skills and abilities, and other characteristics specific to one's profession;

– being able to manage his professional formation and growth on this basis.

Tatur (2004) defines professional competence as the main goal of higher education as follows: "Competence of a highly educated specialist, his desire and ability in practice" (preparation) and his capabilities (knowledge, skills, experience, personal qualities, etc.) to perform successful, creative activities , to use in the professional and social sphere, and to feel the social importance of this activity, personal responsibility for its results, to constantly work on oneself.

Analyzing the concept of professional competence, Yu.G. Tatur explains this concept as the ability to achieve the effectiveness of the activity, the subject's success, luck and the ability to achieve the goal.

Most scholars note that the personal qualities summarized in the framework of professional competence are extremely important for graduates of any higher education institution.

Along with many researchers, we also agree with the above points. According to their opinion, it is necessary for a specialist of a certain profession to acquire the competencies within the scope of his professional activity. They are provided for in the state standards for higher education and are also defined in the issues of professional development and social cooperation of the individual. It is very necessary for the future specialist to acquire professional competence, design, scientific investigation and organizational management, as well as communicative competence.

Nazarova (2014) states that the following types of the competence of professional training of a pedagogue are distinguished based on a number of scientific works:

– mastery of professional activity at a sufficiently high level, ability to plan one's future professional development;

– competence of social education - mastery of joint (group, cooperative) professional activity, cooperation, as well as the methods of professional communication accepted in this profession, social responsibility for the results of one's professional work;

– self-competence - adequate perception of one's socio-professional characteristics

and acquisition of technologies for overcoming professional destruction;

– extreme professional competence - the ability to work in suddenly complicated conditions, accidents, disruption of technological processes, etc.

Results and Discussions

Evaluation of the content of theoretical sources, study of the activities of higher educational institutions and analysis of evidence showed the existence of a number of contradictions in the formation of professional competence of physics specialists, in particular:

– it shows that there are differences between the level of advanced specialist education of a graduate of the physics department of a higher educational institution and the normative qualification requirements imposed on the modernized content and scope of the State Education Standard and the level of realization of his personal potential;

– there are imbalances between the traditional and innovative methods used in the process of forming the professional competence of future physics specialists in higher educational institutions;

– there is no consistency between the activities of higher educational institutions aimed at pedagogical support in the formation of the personality of a physics teacher and his professional competence, and the mechanism and laws of the development of the process of training a student as a future teacher;

– it is noticeable that the possibilities of integration of the specialty, general and specialty subjects with other general education subjects in terms of forming the personal and professional competence of the physics teacher are not sufficiently used;

– it is possible to point out the contradictions between scientific and technical development, the increasing demands of the modernizing society towards the representatives of fundamental fields, and the fact that physics teachers are not ready to work in the conditions of self-development, which is the main part of the formation of their professional competence.

One of the ways to eliminate such contradictions and imbalances is to form the professional competence of future physics teachers such as to form the professional competence of future physics teachers, to create the necessary pedagogical conditions to ensure their professional and personal development in higher educational institutions, to modernize the content and structure of physics teacher training, to determine their psychological and pedagogical conditions, and to develop a quality control and assessment mechanism determines the main goal of formation of specialist competence.

An important factor of improving the educational process is closely related to the high level of professional competence of physics teachers in the higher education 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 teachers in this field based on the effective use of the opportunities of modern educational technologies and the created educational methodological complexes.

In this regard, scientific justification of new approaches that ensure the level of professional competence required from the training period of future physics teachers in higher educational institutions is becoming an urgent task.

A 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 development of the specialist's professional competence. According to the essence of the national education system of our republic, the minimum requirements of the educational content are based on knowledge, skills and qualifications.

From the point of view of the requirements for the level of professional training of graduates, competence means the ability of students to use a set of knowledge, skills, competences and methods of activity appropriately in certain situations.

Due to the fact that the educational content is grouped in the curriculum in blocks of subjects (for all subjects), interdisciplinary (for a set of subjects) and subjects (for a specific subject), we recognize the following three levels of competence:

– basic competencies (according to humanitarian, socio-economic content of education);

– interdisciplinary competencies (according to the specific framework of educational subjects and educational blocks of general professional training);

– competence in one subject (subject) (according to having a clear and certain opportunity within a special educational subject).

Thus, the basic competence is defined for each stage of higher education at the level of educational blocks and academic subjects. In determining the order of basic competence, the nature of social and personal experience in accordance with the main goals of professional education, the main types that allow acquiring life skills in the process of organizing professional activity in social society are of great importance. From this point of view, they are divided into the following types of competence:

1. Comprehensive competence. This is related to the valuable directions of the student, his ability to feel and understand the social existence, to find an independent way of life, to understand his role and place in the social society, to set a clear goal in the organization of actions and to make decisions, competence related to worldview, he is a student provides a mechanism for self-determination in educational and other situations. The student's individual educational direction and the general program of his life activity depend on this competence.

2. Socio-cultural competence. It is the scope of knowledge and activity experience that the student needs to master in depth, the characteristics of national and universal cultures, the spiritual and moral foundations of human and human life, the cultural foundations of family and social traditions, the role of science and religion in human life, their impact on material existence, life and recreation.

3. Academic competence is a set of independent thinking competences, consisting of elements of logical, methodological and social activity of the student related to the concrete objects being studied, including the knowledge and skills of goal-seeing, activity planning, content analysis, reflection, and personal evaluation of the activity. In relation to the studied objects, students acquire creative skills, that is, obtaining knowledge directly from existence, methods of action and heuristic methods of solving problems in non-standard situations.

4. Information acquisition competence. With the help of audio-video presentation tools and information technologies, the skills of independent research, analysis and selection of necessary information, their modification, storage and transmission are formed. This competence ensures that the student learns the basics of academic subjects on the basis of important information.

5. Communicative competence. It includes interaction with students, their methods, mastering the language that takes priority in the communication process, skills of working in groups, organizing and conducting various spiritual and educational activities in the team.

6. Social-active competence in citizenship (citizen, observer, voter, representative), social-labor field (consumer, buyer, customer, producer rights), family relations and obligations, economic and legal issues, professional, as well as personal It means acquiring knowledge and experience in determining one's position (in particular, analyzing the current situation in the labor market, the ability to act in pursuit of personal and social interests, and knowledge of the etiquette of labor and civil relations).

7. Competence related to practical activity means the ability to move from one state of action to another state of action, to apply actions and actions in new situations, to quickly find direction in new information.

Conclusion

According to the analysis of studies devoted to the study of the structure and nature of the professional competence of a future physics specialist, it is appropriate to consider the normative model of training of specialists in the field of physics, which includes educational and cognitive activities for acquiring the future profession. It is expressed in the qualification characteristics of a graduate of a higher educational institution of the relevant direction and level of training, and scientifically based knowledge, skills and qualifications reflect the composition of the professional characteristics of a person.

References:

Galperin, P.Y. (2003). An Experimental Study In The Formation Of Mental Action 1. In *Psychology in the Soviet Union Ils* – 272. – P. 213-225. – Routledge.

Grishina, I.V. (2004). Professional competence of the school director. Abstract of DSc dissertation. – Moscow.

Holmatova, M. (2022). Analysis of the concept of educational content in English (on the example of the field of physics). In *Sovremennaya nauka: aktual'nye voprosy, dostizheniya i innovacii.* – P. 14-16.

Holmatova, M. (2022). Improving professional communicative competence of future specialist-physicists in English. In *Aktual'nye voprosy sovremennoj nauki i obrazovaniya.* – P. 216-218.

Kasimova, F. A., & Dzhuraeva, F. B. (2022). Ўzbekistonda Pedagog Kasbij Kompetentligining Ўziga Hos Hususiyatlari. Vestnik nauki, – 1(5 (50)). – P. 29–33.

Leont'ev, A.N. (1959). Problems of mental development. Moscow: Publishing House of the Academy of Pedagogical Sciences RSFSR.

Leont'ev, A.N., & Luria, A.R. (1968). The psychological ideas of L. S. Vygotskii. In B. B. Wolman (Ed.), Historical roots of contemporary psychology. – P. 338–367. – New York: Harper & Row.

Nazarova, B. (2014). Social-Pedagogical Significance of Future Teacher's Scientific World-View. *The Advanced Science Journal*, – (8)ю – 4 p.

Slastenin, V. A., Isaev, I. F., & Shiyanov, E. N. (2002). Pedagogy. *textbook. manual for students. higher. ped. studies. institutions / VA Slastenin, IF Isaev, EN Shiyanov. – M.: Academy*.

Tatur, Y.G. (2004). Competence in the structure of the quality model of specialist training. *Higher education today*, – 3. – P. 20-26.

Vygotsky, L. S. (1966). Development of the higher mental functions. In A. N. Leont'ev, A. R. Luria, & A. Smirnol (Eds.), Psychological research in the U.S.S.R – Vol. 1. – P. 11–54. – Moscow: Progress. Original work published 1931.

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