



THEORETICAL ISSUES OF CHEMISTRY TEACHERS TRAINING IN UNIVERSITIES

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Annotation

This article describes in detail the theoretical aspects of the problem of training chemistry teachers in universities. The identified characteristics were the basis for developing a model of pedagogical training for non-specialist students in the additional qualification "Teacher".

Keywords: chemistry education, teaching content, teacher training, activities, teaching model.

Diversification of the content and structure of higher education in our republic deepened the problem of training competent personnel who can meet the modern needs of society, where the issue of finding a place for specialists at all stages of continuous education is a priority. The content and content of professional education is significantly updated in the requirements of modern science and technology development and strong competitive environment.[1-3]

As the main trends in the training of future teachers in universities, the opportunities to meet the needs of the social institution and the labor market, the growing need for personal and professional development, opportunities to continue studying abroad and get a job are determined.

Today, the importance of obtaining additional professional education as a strong integration factor that unites the social requirements of higher educational institutions and society is growing significantly. Therefore, the need to train pedagogic personnel in universities creates a strong competitive environment among higher education institutions and requires a unique approach to their professional training.

In the experience of universities, training of future teachers is a necessary type of activity. The need to train future teachers is explained, firstly, by the increase in the rights of the individual in forming the content of his personal information, and secondly, by the expansion of the requirements of employers for the quality of training of specialists. The training of future teachers in universities can be provided by the higher education institution to the consumer on the basis of the existing higher professional education and during the period of mastering the educational program of the higher professional education of the appropriate level. It goes





without saying that the need to train future teachers is aimed at expanding the possibilities of more effective use of the content of the main specialty [4].

Thus, the training of future teachers in the period of mastering the educational program of higher professional education of the appropriate level actually implies the diversification of the main specialty content of the training. The possibility of this type of diversification of academic activity leads to the following types of educational areas:

- Teaching in an in-depth direction to the teacher's professional activity according to the approximate curriculum of the DTS qualification requirements educational programs in the field of chemistry;
- Training for additional qualifications according to the approximate curriculum of DTS educational programs.

According to the pedagogical dictionary, additional educational services are a set of special and basic competencies that reflect corporate (industry, industry) requirements, and the concept of "competency" is defined in the encyclopedic dictionary as follows: "1) the set of powers conferred by law, statute, or other instrument on a specific body or official. 2) knowledge and experience in a specific field". In the explanatory dictionary of S.I. Ojegov, the concept of "competence" is interpreted as "1) the fact that someone is well aware of certain issues (knowledge), 2) someone's set of powers and rights." Based on this, the principle of additional qualification compared to the basic level of qualification allows students to choose and expand competencies, and the professional community to improve the quality of professional activity. Additional qualifications are implemented on the basis of the professional education system [5].

According to the author, the target directions in this system are as follows: meeting the needs of social customers regarding the quality of educational results, forming new value bases for supplementing the qualification requirements with additional qualification standards as standards of professional competencies, as well as the practical application of professional education. to emphasize the aspect. In accordance with the presented goals, there are the following levels of professional competencies in the training of future chemistry teachers in universities:

First Level: educational competencies of students related to the ability to apply knowledge, skills and qualifications related to chemistry in professional activities;

Second Level: subject-specific competencies in all subjects included in the DTS qualification requirements for the specialty;

Third Level: professional competencies as a set of competencies that expand the professional potential.





In the author's interpretation, competences belong to the type of activity, competence describes the subject of activity. Competence does not contradict knowledge, skills, abilities and personal qualities.

Subjects included in additional education programs participate in the formation of a single qualification space and the development of specialist training based on the consistency of qualification and educational requirements, the competence content of educational and methodological documents and the development of combined forms of organization of the educational process; the process of prevention of centralization of the educational process management structure and decentralization of management tasks and mechanisms is carried out.

In the explanatory dictionary of S.I. Ojegov, the concept of "Field" (specialty) is defined as "a set of unique features characterizing a certain profession, as well as a description of a production or educational aspect."

The volume of theoretical education for all fields of education, except for health care education, is divided according to blocks of subjects:

- Natural-scientific and humanitarian sciences - 15-25%;
- General professional subjects -20-50%;
- Specialty subjects - 20-50%;
- Additional subjects - 2 - 7 %

The content, volume, methods and means of studying specialist subjects are determined based on the goals and tasks of training a specialist, his theoretical and practical skills. Based on specialization, all educational subjects are divided into specialization and non-specialization subjects, which are interrelated and can change according to a number of reasons and conditions. In turn, non-specialist subjects are also divided into two types: "elective" and "compulsory" subjects based on the specific requirements of training a specialist in relation to specialized subjects.

"State educational standard of higher education" of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan. Basic rules" of the state standard of the Republic of Uzbekistan according to the appendix of order No. 35-2021 of October 19, 2021 (paragraph 4.1.1):

block of compulsory subjects requires in-depth mastering of subjects and enriching the intellectual potential of students, forming the necessary fundamental knowledge, professional skills, training and competencies related to the field of study and field, the chosen direction and specialization for the graduate should create a foundation for engaging in professional activities and continuing education in a specific master's specialty in the future;

block of elective subjects to ensure that students of the bachelor's degree acquire additional in-depth theoretical and practical knowledge and skills, expand their professional competencies





taking into account innovative methods and regional factors of the field, to educational trajectories should create an opportunity to acquire appropriate professional knowledge and skills [6].

The analysis of a number of researches and scientific works [7-9] related to this problem made it possible to make the following conclusion, that is, science preparation is the process of assimilation of the subject content of science by students in the process of learning specialized subjects, as well as the level of development of the specialist, his special knowledge, refers to the result of training that characterizes the level of formation of skills and competences.

In the process of scientific training, if an organic connection is established with professional training, it will have integrative features [10]; the integrity of the goals and tasks of the entire professional training system is achieved, that is, the personality of a specialist is formed. In this way, the process of professional training of a future chemistry teacher is formed (Table 1)

Table 1 Preparing the future chemistry teacher for professional activity

Educational process	Educational result
Acquiring the system of professional competencies.	Being ready to carry out professional activities
Professional activity of the specialist	

In this process, in our opinion, professional preparation for the implementation of activities is considered as a means of creating a system.

Thus, during the analysis of scientific-pedagogical literature, important features of pedagogical training were clarified: pedagogical activity, pedagogical competence, pedagogical thinking; The characteristics of the pedagogical training of the students of the non-specialist course in the additional qualification "Teacher" were determined:

- The intensity of organizing the process of pedagogical preparation of students in the conditions of shortage of study time in the curriculum of the additional "Teacher" educational program;
- Implementation of meaningful and technological level connections between disciplines and subjects in the direction of "pedagogical training - basic professional education";
- Increasing the importance of students' independent work as an individual education;
- "Problematic" by creating a system of differentiated and different levels of tasks necessary for the formation and development of a complex of pedagogical skills, which is the basis of independent pedagogical activity, in the process of training for additional qualifications. implementation based on the idea of the approach;



- Implementation of pedagogical training of students based on a person-oriented approach and through individualization of their educational activities.

The identified characteristics formed the basis for the development of a model of pedagogical training of non-specialist students on the additional qualification "Teacher".

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