MODEL OF ORGANIZATION OF FUTURE TEACHERS' EDUCATIONAL PROCESS IN TERMS OF INFORMATION ENVIRONMENT

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Abstract

Characteristics of the model of the future teachers' educational process organization in terms of information environment was presented. These characteristics are based on a complex, multifaceted approach that involved a close relationship of academic and extracurricular professional activities was revealed. The content of each component of the developed model by its functioning was examined.

Introduction

The level of professional training, competitiveness of specialists, mobility, ability to work in a team, and success in the profession depend on the degree of professional competence at the formation level. Thus, the formation of teacher's professional competence in the use of information and communication technologies in education and research activity is among the priorities of pedagogical education. It requires the modernization of the content, improvement of the quality of education, development of a new model of the educational process organization.

Development of a new model of the learning process organization is based on several factors.

Firstly, the current socio-cultural situation in society requires high demands on future teacher's personal and professional skills. Modern education needs teachers having not only high professional competence and pedagogical thinking, but also able to solve traditional and innovative pedagogical tasks, efficiently find optimal ways of their solutions, and actively use information technologies.

Secondly, education should provide a holistic development of future teacher personality, his formation as a bearer of not only knowledge and behavior norms, but also human and professional values.

Also, the objectives and content of modern specialists' professional training are determined by the needs of society to have competitive personnel. Therefore, it is necessary to define what the university graduates should know and be able to do. It will be the basis of effective teaching activity, as well as further professional self-improvement and implementation of lifelong learning [1].

This goal is particularly relevant in terms of the transition to variable education, which implies freedom of pedagogical creativity. If the teacher has a high level of professional competence he will be able to navigate in modern teaching technologies and methods, information and communication technologies, adequately evaluate them and use in practice and research activity.

Thirdly, the urgency of this question today is increased by the fact that pedagogical universities view educational activity based on the standard of a new generation, which embodies the principles of the European system of education quality assessment - competitive approach to determining the content and results of the training. It also requires the review of constant approaches to content, and to the structural organization of the educational process.

Many scientific works of S. Arkhangelskyi [2] Y. Babanskyi [3] N. Kuzmina [4] and N. Talyzina [5] were dedicated to examining the opportunities of modeling as a method of analysis and synthesis of pedagogical systems and professional activity. Different approaches to modeling were grounded and the importance of this method in the educational processes studying was proved in the researches. N. Nychkalo notes that in modeling the system it is necessary to be guided by the fact that it (the system) is based on the unity of purpose, objectives, various types of activity, organizational forms, criteria for the system functioning as a whole and its individual subsystems.

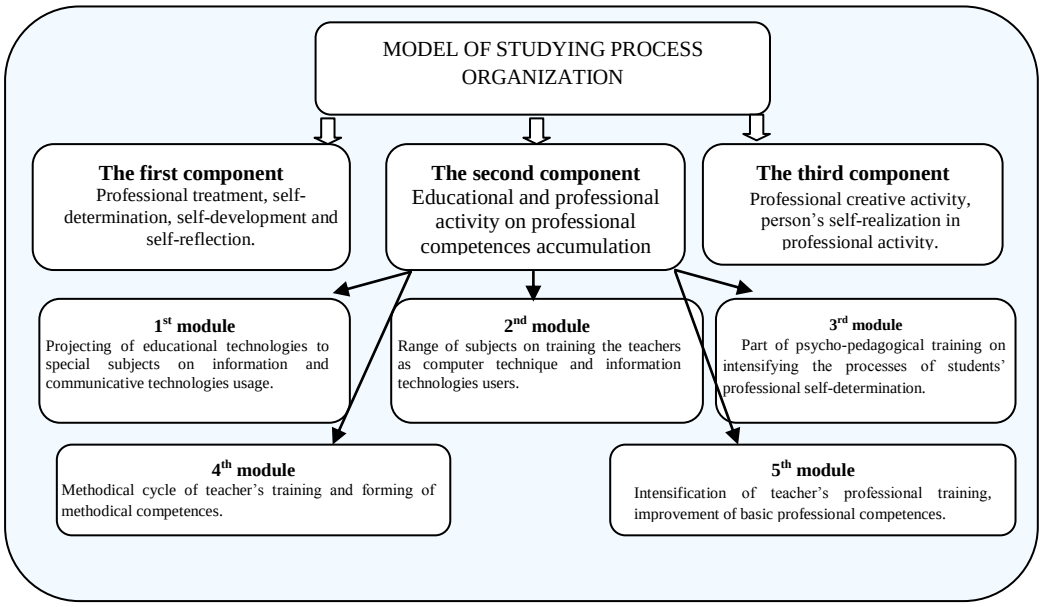
The purpose of the article is to develop a model of future chemistry teachers' educational process organization in terms of information environment.

Analyzing the new standards, we determined that the ability for self-realization can be formed in educational and research activity of the future teacher. Forming the ability to independently acquire and use new knowledge and skills in practice, including in new areas of knowledge, not directly related to the field of activity; the ability to analyze research results and apply them in solving specific educational and research tasks; willingness to independently perform scientific research using modern methods of science, etc. were also defined.

Based on the foregoing, we conclude that the current model of the educational process should include three components:

- mastering of professional competences systems and gaining the professional activity experience;
- professional self-determination, self-reflection;
- creative self-realization.

Scheme1. Model of future teachers' studying process organization in terms of information environment



The first component of the model of future teacher's professional training is educational and professional activity on professional competencies accumulation. It is the model's element, where psychological, educational, special (subject) and information training are integrated. As a basis we take a program-oriented principle, which implies pedagogical integration of all curriculum's subjects relative to the ultimate goal of university studying. Therefore, the ultimate goal of teacher's professional competence development can be possible through achievement of many intermediate (intradisciplinary and interdisciplinary) objectives.

The conducted researches allowed to determine three phases of training: propaedeutic, basic and creative in this component of model. Several modules were identified within each stage.

1st module is a component of technology education projecting to special subjects on information and communication technologies usage in university studying. We consider its essence as the informatization of teacher's special training.

2nd module is a block of subjects that train teachers, as users of computer techniques and information technologies. The main tasks of this module are to develop a certain level of future teacher's information competence.

3rd module is a part of psycho-pedagogical training. The module content includes a set of information necessary for the successful implementation of educational activity and focuses on mastering the main concepts that form the basis of educational activity. This module is designed to intensify the process of student's professional self-identification and promote the formation of future teacher's important personal qualities.

We combined these three modules in the so-called propaedeutic stage of the 1st model's component.

4th module is a methodical series of teacher training. The main goal is to form the teaching competences: the ability to select relevant information and construct a substantive academic content therein; ability to theoretically ground the professional tasks; willingness to evaluate own activity and the activity of students, teaching them an assessment and self-assessment; the ability to organize various activities and etc.

The first four modules are invariant component of the model of future teachers training. This training volume doesn't allow to fully form a high level of professional competence of the university graduate that meet the qualification requirements in professional activity.

In regard to improving the quality of teacher education in the structure of the model it is important to include the 5th module aiming at enhancing the teachers training.

To do this, firstly, we can recommend the subjects that according to the content are responsible to various aspects of usage of information technologies in education: courses, which content contains the question of the methodology of using the computer modeling in studying; courses, whose content reflects

the question of multimedia technology in education application; courses of methodological direction where the priority is given to questions of use of communicative technologies in teacher's professional activity etc.

Secondly, it is possible the teachers' preparation for research activity. You can offer subjects that solve the tasks of forming one of the toughest professional competences: skills and abilities to carry out scientific and theoretical projecting, practical implementation and evaluation of effectiveness of training systems, education and development through modern didactics, theory of education and educational technologies of specific subject area. Gaining the skills for methods use, and techniques of didactic research; formation of skills for experimental data collecting and processing; their interpretation and issuance in the form of an integrated research help in raising the level of general academic training necessary for a successful professional teacher's activity.

The main task of this module is to improve basic professional competences, bringing them to a higher level. The volume of independent work of students increases (in contrast to the 4^{th} module). The acquisition of competencies in specific pedagogical situations plays a particular role in this stage. Testing methodological ideas carried out during practical classes (students' performance with showing the lesson's or its fragment imitation) and teaching practice, where students are required to specify their knowledge on the research problem, joined to the practice of the educational process modeling and implementation, evaluation and analysis of their own teaching methods and teaching methods of their fellows and experienced teachers.

Such practical student activity is a system-making component of the content of future teachers professional training because personal and professional values become useful only if they are assigned to and produced by man, not only in the cognitive but also practical activity.

The second component of the proposed model is the professional students' training, where a meaningful aspect is the professional self-determination, self-development and self-reflection. Student can fully realize himself as a personality, effectively organize educational cooperation and pedagogical communication only if he adequately assess his professional and personal qualities and tries to improve them. We create the conditions for maximum disclosure and development by each student reaching their personal potential in the university: create an atmosphere of creative self-development; form the students' readiness for professional activity in the modern information environment. Educational activities on Teachers' day are organized. Students actively participate in cultural events - "Dedication to freshmen", "Freshmen presentation", "KVN", "Student Spring" and others. The main goal is to develop students' skills and abilities of creative approach to any activity.

The third component of the model of future teachers training is professional creative activity. Its content is creative person's self-realization in the profession. Together the forms and methods of the educational process the various important professional competitions take place. They include organized diagnostics of the level of future teachers' professional competence formation aimed at providing intensive feedback and define the possibility of achieving the ultimate education goal - quality training of the graduate. The instruments of evaluation of future teachers' professional competence formation can be considered a "Festival of Pedagogical Creativity" held annually in Pavlo Tychyna Uman State Pedagogical University. Students learn to develop the skills of effective use of practical knowledge and experience gained during their studying. The contest promotes the development of the teaching profession authority and prestige; identifying talented, creatively minded students capable to successful scientific research, organizational and educational activities; creating conditions for the development of creativity; active professional position in attracting to the teacher's profession; stimulating the formation of professional self-identification, self-determination, self-realization and self-assertion; the development of professional courage and independence of future teachers in search and implementation of innovations in education.

Conclusion

Our proposed model of future teacher training is based on a complex, multifaceted approach that involves a close relationship between academic, extracurricular and professional activities. It is a complex mixture of personal and professional levels, where the focus is a sustained motivation for teaching activity and suggests the presence of professional competencies in the graduate that can be successfully implemented in practice.

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