УДК 378.147.156

Д. М. Чарыев, М. В. Фоминых
D. M. Charyev, M. V. Fominykh
Средняя школа № 36, Иолотань, Туркменистан
ФГАОУ ВО «Российский государственный профессионально-педагогический университет», Екатеринбург
Secondary School № 36, Iolotan, Turkmenistan
Russian state vocational pedagogical university, Ekaterinburg
didarcharyev90@gmail.com, Fominykh.maria12@yandex.ru

ПРОБЛЕМНО-МОДЕЛЬНАЯ СРЕДА В ПЕДАГОГИЧЕСКОМ ОБРАЗОВАНИИ

PROBLEM-MODEL ENVIRONMENT IN PEDAGOGICAL EDUCATION

Аннотация. В статье рассмотрены педагогические условия существования проблемно-модельной среды в рамках проблемного моделирования как инновационного подхода в обучении. Дается определение методической системы. Предложены принципы формирования данной системы.

Abstract. The paper deals with the pedagogical conditions of the existence of problem-model environment in the framework of problem model as an innovative approach to learning. The definition of methodical system is given. The principles of formation of this system are proposed.

Ключевые слова: проблемное моделирование, проблемно-модельный подход, проблемно-модельная среда, инновации.

Keywords: problem modeling, problem-model approach, problem-modeling environment, innovations.

In the second half of the twentieth century, humankind faced a global trend of shortage of qualified teaching staff. The number and quality of specialists with higher pedagogical education were insufficient to work with modern technologies in the field of education.

According to many authoritative scientists, a new form of organization of the educational process in universities can become a powerful resource for the development of professional pedagogical education, training and retraining of highly qualified personnel [1; 2; 9]. It determines the necessity of scientific study of the formation and development of new modern pedagogical technologies in the system of pedagogical education.

The process of "renovation" the system of professional education is aimed at training a competitive specialist who is ready to carry out professional activities in modern society. Thus, pedagogical science and practice are characterized by the problems of designing and modeling of further professional pedagogical activity, the solution of which is associated with the use of various technologies, methods, techniques, software designed to collect and analyze professionally significant information.

We define a methodical system of teaching of pedagogical specialties students principle subjects as a set of interrelated components: professionally significant goals; content, reflecting the fundamental methods of pedagogy, in accordance with the qualification requirements of the pedagogical industry to prepare a professional teacher; means, organizational forms and methods of teaching on the

basis of problem-model approach, emerging and developing in the modern educational environment.

The structural components of the scientific and methodological system of teaching students of pedagogical specialties principle disciplines in the context of the problem-model approach of the system are the following:

1. Learning objectives.
2. Syllabus.
3. Methods and techniques of training.
4. Training resources.
5. Forms of training.

So, we believe that learning is the most effective when it is built as a methodical system.

Thus, the problem-model environment should be flexible, easily modifiable, expandable, easy to manage and maintain [4,6,7].

Organizational and technological basis of the problem-model environment

Most publications on the problems of designing the components of the problem-model environment are reduced to the discussion of various options of the use of new pedagogical technologies, etc. As a rule, out of the field of view of the authors is the content of the problem-model environment for the specialty, i.e. information of educational, methodical nature, as well as information used to manage learning. We believe that the organizational and technological basis of the problem-model environment is a set of technologies, methods and tools of the problem-model approach in order to regulate and improve the educational process.

Functional structure

The functional structure of the problem-model environment is based on the integrated use of traditional, information, module - rating technology and technologies of the problem-model approach. It implements the following types of training activities:

− professional-oriented dialogue between teacher and student;

− continuity and completeness of educational information - organization of the educational process on the principles of problem-model approach gives it the quality of openness, mobility and flexibility;

− accumulation of information containing professionally significant basic and specialized knowledge, including the actual phenomena in the teaching industry, the transfer of a sufficiently large amount of information presented in various forms;

− openness of control processes (including self-control) over the results of educational activities with subsequent correction and self-correction;

− "phasing" of activities from diagnosis-analysis to diagnosis-evaluation.

Methodical conditions

Let’s define the methodological conditions for the successful implementation of the problem-model approach in teaching the disciplines of the principle subjects cycle:

1. Organization of independent activity of students for successfully capturing of the theory through practice.

2. The integration of basic and general disciplines and principal disciplines among themselves is a way to update the existing knowledge, skills and ways of working on separate disciplines.

Learning objective

The main purpose of teaching students, which provides a methodical system in terms of problem-model approach – to teach to understand and identify common patterns in pedagogical and language professionally important tasks, the ability to find the necessary information to simulate future professional activities.

Content

Speaking about the content of the methodological system in terms of problem-model approach for students of pedagogical university, first of all, it should be based on the requirements of the Federal State Educational Standard of Higher Professional Education and Higher Education (FSES) for this specialty. We define the content of education as pedagogically reasonable and logically ordered, textually fixed in curriculum scientific information about the material to be studied.

According to the concept developed by Lerner I. Y. [3], the formation of the learning content is a multi-level process of designing and constructing this content, based on the pedagogical understanding of the social mandate and the activity nature of capturing social experience. Methodological guidelines for the selection of content are the system and personal-activity approaches.

The system analysis of the content of teaching disciplines of the profile cycle, allowed to identify and formulate a number of important principles that determine the theoretical aspects of the formation of the methodological system of teaching principal disciplines of students of pedagogical universities in terms of problem-model approach [6; 7]:

1. *The principle of goal-setting.* The teacher together with the student formulate the learning goal and plans learning activities to achieve it.

2. *The principle of unity of elements' relations of the methodical system of training.* The components of the methodical system of training are interrelated and interdependent: changing one of them necessarily requires changing the other.

3. *The principle of functional completeness of the methodical system of education.* Implementation of the methodical system of training in the conditions of problem-model approach is possible if its components (goals, content, methods, forms and means of training) are simultaneously components of the problem-model subject environment.

4. *The principle of openness of functional and methodical actions of methodical system.* Everything that is done in the learning process should be clear, logically sound and informative for students and teachers.

5. *The principle of objective evaluation of the final result* is one of the main underlying educational technologies. Only when this requirement is completed productive control and correction, search for ways of control and correction of mistakes appear.

6. *The principle of continuity and completeness* is the consistency of not only the content of training, but also the model, forms of educational activity in the organization of classroom and independent activities of students. At each level

of presentation, perceptions, knowledge, skills are expanded and deepened. Achieving the goal is obligatory, and the transformation of the content of education is necessary to achieve the goal in the interests of the student. Classroom activities of students should be coordinated with independent activities and it should ensure the satisfaction of needs and interests of the subjects of education.

7. *The principle of flexibility of means, methods and organizational forms of technology implementation into training.* A wide range and variety of tools, methods, organizational forms and types of technologies ensure the full value of the educational system, provides freedom of creativity, initiative and activity in the context of the problem-model approach.

8. *The principle of optimization* requires in each case the choice of the best option for the content of funds, forms, methods of implementation and operation of technologies, time, effort, degree of difficulty, science, creation of optimal conditions for the activities; skillful manipulation and regulation of actions; operational control and correction of activities.

Proposed methodical system of teaching students of pedagogical specialties of the specialized disciplines cycle has been successfully implemented in the educational process of the Department of German Philology, Federal state autonomous educational institution "Russian state vocational pedagogical university".

References

1. *Benin V. L.* Pedagogy of humanism and trends of the modern Russian society / V. L. Benin Siberian pedagogical journal. 2017. № 1. P. 131−136.
2. *Kislov A. G.* From advanced to transprofessional education / A. G. Kislov // The Education and science journal. 2018. Vol. 20. № 1. P. 54−74.
3. *Lerner I. Y.* Didactic bases of teaching methods / I. Y. Lerner. Moscow: Pedagogy, 1981. 186 p.
4. *Markov S. M.* Modeling of educational systems : monograph / S. M. Markov. Nizhny Novgorod : WGIP, 2003 (RIC polygraph WGIPA). 142 p.
5. *Makhmutov M. I.* The organization of problem training in school: book for teachers / M. I. Makhmutov. Moscow: Enlightenment, 1977. 240 p.
6. *Makhmutov M. I.* Problem-based learning. Basic questions of theory / M. I. Makhmutov. Moscow: Pedagogy, 1975. P. 246−258.
7. *Modeling* of pedagogical situations. The problem of improving the quality and effectiveness of general pedagogical training of teachers / Y. I. Kulyutkin [and others]. Moscow: Pedagogy, 1981. 120 p.
8. *Monakhov V. M.* Pedagogical design-modern tools of didactic research / V. M. Monakhov // School technologies. 2001. № 5. P. 75−89.
9. *Steinberg V. E.* On constants of being and invariants of education (in the order of discussion) / V. E. Steinberg, N. N. Manko // Bashkir pedagogical journal. 2017. № 4. P. 145−157.