ANALYSIS OF THE ESSENCE AND LOGICAL ASPECTS OF THE OPTIMAL METHODOLOGY OF ELECTRONIC EDUCATION IN FORMING STUDENTS' COGNITIVE ACTIVITY

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Annotation

Determining the form of student involvement in educational and cognitive activities that ensures methodological coordination of all types of the educational process, systematic approach, effective control of knowledge acquisition, creation of personal direction and differentiation of student education, The analysis of the essence and logical aspects of the optimal methodology of e-learning in increasing the cognitive interest and activity of students with high and low mastery in the process of adaptation to the educational process.

Keywords: methodological, cognitive, systematic approach, differentiation, e-learning, optimal, modular, individual differentiation.

АНАЛИЗ СУЩНОСТИ И ЛОГИЧЕСКИХ АСПЕКТОВ ОПТИМАЛЬНОЙ МЕТОДОЛОГИИ ЭЛЕКТРОННОГО ОБРАЗОВАНИЯ В ФОРМИРОВАНИИ ПОЗНАВАТЕЛЬНОЙ ДЕЯТЕЛЬНОСТИ СТУДЕНТОВ

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Аннотация

Определение формы вовлечения студентов в учебно-познавательную деятельность, обеспечивающей методическую согласованность всех видов учебного процесса, системный подход, эффективный контроль усвоения знаний, создание личностной направленности и дифференциации обучения студентов. Анализ сущности и логических аспектов. оптимальной методики электронного обучения в повышении познавательного интереса и активности обучающихся с высокой и низкой успеваемостью в процессе адаптации к образовательному процессу.

Ключевые слова: методологический, когнитивный, системный подход, дифференциация, электронное обучение, оптимальное, модульное, индивидуальная дифференциация.

To form cognitive activity, knowledge and skills of schoolchildren in the Republic of Uzbekistan, to educate them in the spirit of loyalty to national and universal values, to increase the prestige of the teaching profession and the quality of pedagogues, to improve textbooks and teaching methods based on the requirements of the times, a special responsibility has been assigned to the establishment of modern models of public education institutions that meet international standards. For example, in this regard, the first President of the Republic of Uzbekistan, I.A. Karimov, addressed to teachers, "We rely and rely on these hard-working professionals in fulfilling the responsible tasks of educating a new generation, new thinkers in our country, We imagine how incomparable their service is in shaping the world" and our President Sh.M. Mirziyoev "The basis of science and development. The opinion that neither the state nor the society that does not rely on the achievements of modern science and innovative ideas has no future" fully represents the content and essence of the demands placed on teachers [1]. The social changes that have occurred in our republic have significantly changed the requirements for graduates of general secondary education in recent years. For a graduate today, it means that not only having certain knowledge, but also the formation of knowledge, skills and competences should be considered as the most important factor. Therefore, the analysis of the essence and logical aspects of the optimal methodology of e-learning in shaping the cognitive activity of students is currently an urgent problem. In the process of studying this problem, we collected the concept of activity in students as a method. Psychological literature analyzed in the implementation of activity (K.L. Abulkhanova-Slavskaya, L.I. Bojovich, A.I. Leontiev) allows us to draw the following conclusions:

- the activity acts in connection with the activity and determines the nature of the subject's activity;
- sources of activity appear in natural needs, social needs and, first of all, social and personal needs;
- activity is related to problems of human abilities and depends on personal qualities that determine internal needs;
- activity is manifested in creativity, volitional actions and communication;
- activity is related to motivational problems (psychologists emphasize the motivational force, the direction of behavior in a particular direction [2].

If cognitive needs are fulfilled in the process of activity, then the person is the subject of cognitive activity. The most effective knowledge is carried out only in a specially organized process of educational activity, that is, educational and cognitive activity.

Therefore, education and cognitive activity is one of the main activities of students. Educational and cognitive activity is one of the types of students' activities, which meet his cognitive needs and interests, as a result of which he acquires knowledge, develops skills and competencies, is a purposeful independent or teacher's interaction of students with the surrounding reality. is a process controlled by

In this regard, the following tasks of the teacher become relevant.

In students:

- formation of various educational and cognitive skills;
- formation of students' skills of independent acquisition of knowledge;
- formation of the ability to self-educate;
- the activity of forming students' creative attitude towards themselves;
- preparing students for professional activities.

By the activity of students in learning, we mean the following:

- students' active attitude to study, especially mathematics;
- it is manifested in their effective educational and cognitive activities;
- students' ability to acquire knowledge independently;
- students interact with the surrounding reality.

Analyzing the pedagogical literature, we focused on the following stages in the process of studying the active learning and cognitive activity of students, manifested in the initiative position of the teacher:

- learning stages;
- improvement of the methods and organizational forms of educational work that ensure active and independent educational and cognitive activity of students in the process of professional training;
- development of students' mental abilities and personality in general (L.I. Aristova, R.A. Nizomov).

Having studied the psychology of youth in the process of studying these stages, we highlighted the characteristics that affect the level and state of activity of schoolchildren:

-self as a subject of activity, the ability to distinguish between what is possible and what is necessary (working for the future), striving for social work, the formation of life plans, increasing attention to the uniqueness of mental abilities, striving for independence, the field of will to increase maturity, to strive.

- unusual, reaction to novelty, introspection and a tendency to conscious self-control (L.I. Bojovich, I.S. Kon).

Thus, the activities of schoolchildren in solving the problem of education and cognitive activation can be studied in the following directions:

- to determine the level of formation of students' skills in various types of educational and cognitive activities;
- formation of a positive emotional attitude to the subject in students;
- providing conditions for students' self-assessment based on self-control and self-correction;
- creating conditions for independent learning and cognitive activity [3].

The level of preparation of schoolchildren for educational and educational activities is different. This creates additional difficulties for the teacher. Therefore, in order to increase the effectiveness of this work, first of all, it is appropriate to determine the level of formation of students' skills in various types of educational and cognitive activities, and only then it will be possible to determine the system of educational and cognitive activities and manage it.

In order to activate the process of increasing the efficiency of teaching students, it is appropriate to build educational and cognitive activities on the basis of information technologies along with the factors listed above. In the modern world, information technologies occupy a key place in science and production. The information process has a significant impact on changes in didactic processes taking place in educational institutions. According to a number of scientists (V.P. Bespalko, R.A. Kharchenko):

- information and communication technologies are such a tool of human activity, the use of which qualitatively changes and increases the ability of each person to collect and apply knowledge, as well as the ability to know. By the term "information technologies" we understand the processes of collecting, processing, presenting and using information [3].

Information technology with the help of electronic means is a very effective tool for solving many practical problems in the economic and social spheres, and also occupies a great place in the sphere of science, education and culture. In the process of research, studies and analysis of scientific works, we came to the following definition - the information technology of education is the process of preparing and transmitting information to the student, the way the student uses information, and the means of its implementation is the computer.

In addition, we consider it important to be personality-oriented, individually differentiated, and activity-based in our studies. We follow person-oriented professional education, because the process of organizing the interaction of

educational subjects in this educational environment is a small level of the professional development of a person. The student-centered approach is especially evident in the individualization of education.

Because e-learning can only be improved through action, the action approach is effective. The activity approach is a theory, and its main position is the rule about the leading role of activity in the process of educating a person. As part of an active approach to improving the e-learning of students, independent work should be given a large role, because it shows initiative, self-management, introspection and other personal characteristics. In modern conditions, the goals and tasks of personal education are complex and multifaceted, and their solution requires a diversified approach. We consider it important to use a systematic approach, because objects of pedagogical research are complex formations consisting of interrelated elements.

The relevance of the systematic approach is explained by the fact that it is effective to solve any pedagogical problem using only a number of interrelated methods. Based on the rules of the systematic approach, the stages of systematic study of educational and cognitive activities of schoolchildren, in particular:

- identifying the cognitive activity leading to death as a system;
- separation of structural elements of this system;
- consideration of each element, their characteristics, operation;
- selection and review of links between elements of our system;
- determining the principles and methods of optimal organization of the system, educational and cognitive activity of students.

We can distinguish information technology efficiency factors based on modular and individually differentiated approaches:
- ensuring methodologically reasonable coordination of all types of education processes within and between each module;
- a systematic approach to the construction of the course and determining its content;
- the flexibility of the structure of the modular construction of the course;
- the variability of the pace of learning the material, the speed of assimilation in accordance with individuality;
- performance of classified work and individual assignments;
- individualization of teaching content, conducting knowledge diagnostics;
- the goals of learning individual control and self-control after reaching a certain level [4].

The following forms of education are the basis for our research work: lectures, practical and laboratory training, independent work. In this process, we consider work as the main method of teaching laboratory and practical work, and the main tool

is a computer and a set of applied mathematical programs. Innovative transformation of the educational process can be based on multi-level educational technology, which relies on differentiation as a leading pedagogical problem. Therefore, the basis of multi-level education is differentiation.

In the course of our research work, we faced the need to determine the form of engaging students in educational and cognitive activities, which ensures methodological coordination of all types of educational process. This can be done on the basis of a systematic approach to the construction of the course, and determining its content, effectively controlling the acquisition of knowledge by students, personal direction and differentiation of student education, and creating conditions for independent work of students. Traditional teaching often directs the teacher to the average level. Students with a high and low level of development often get out of it, the educational process must be adapted, which leads to a decrease in their cognitive interest and activity. We can see the main way to overcome this deficiency in the use of multi-level teaching technology.

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