IMPROVING THE METHODOLOGY OF PROFESSIONALLY-ORIENTED TEACHING OF STUDENTS OF ACADEMIC LYCEUMS IN MATHEMATICS LESSONS

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Abstract. *This article examines the use of digital technologies in the process of improving the methodology of professionally oriented teaching of students of academic lyceums in mathematics lessons, expanding the possibilities of independent learning in the context of digital education, and, based on experience,the level of effectiveness of the results obtained is determined.*

Keywords:*cognitive, creative, talent, motivation, innovation, creativity, critical thinking, problem solving learning. student work.*

AKADEMIK LITSEY O'QUVCHILARINI MATEMATIKA DARSLARIDA KASBIY-YO'LLI O'QITISH METODIKASINI TAKMORLASH.

Annotatsiya. *Ushbu maqolada matematika darslarida akademik litsey o'quvchilarini kasbga yo'naltirib o'qitish metodikasini takomillashtirish raqamli ta'lim sharoitida mustaqil bilim olish imkoniyatlarini oshirish jarayonida raqamli texnologiyalardan foydalanish mazmuni yoritilgan, shuningdek, tajribalar asosida olingan natijalarning samaradorlik darajasi aniqlanadi.*

Kalit so'zlar: *kognitiv, kreativ, iste'dod, motivatsiya, innovatsiya, ijodkorlik, tanqidiy fikrlash, muammolarni hal qilishga o'rgatish. talaba ishi.*

СОВЕРШЕНСТВОВАНИЕ МЕТОДИКИ ПРОФЕССИОНАЛЬНО-ОРИЕНТИРОВАННОГО ОБУЧЕНИЯ УЧАЩИХСЯ АКАДЕМИЧЕСКИХ ЛИЦЕЕВ НА УРОКАХ МАТЕМАТИКИ

Абстрактный. *В данной статье рассматривается использование цифровых технологий в процессе совершенствования методики профессионально-ориентированного обучения учащихся академических лицеев на уроках математики,*

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расширение возможностей самостоятельного обучения в условиях цифрового образования, а также, на основе опыта, определяется уровень эффективности полученных результатов.

Ключевые слова: *когнитивные, творческие, талант, мотиватsiя, инноватsiи, креативность, критическое мышление, обучение решению проблем. студенческие работы.*

INTRODUCTION

Today, the creation of a competitive national system of personnel training is relevant in our country.The reforms that are currently being carried out open up broad opportunities for the application of mathematical knowledge in various fields of science and technology, and ensure the effective integration of education, science and production. academic lyceum expanded the opportunities for graduates to use technologies and approaches to orient them to a specific profession through general education subjects and preparation for work in the labor market. High production efficiency depends on the degree to which work collectives have mastered the achievements of science. The productive forces of society cannot develop without the participation of a deeply educated and qualified workforce. The rapid development of technology and production technologies requires workers to be aware of new technical innovations and be able to quickly master new skills.

In accordance with the tasks that the market economy sets for production, in modern conditions the complication of the professional and production orientation of workers becomes a regularity of production and a constantly acting factor of development.

In modern conditions, higher general education is not only the basis of professional education, but also one of its important aspects. A highly qualified worker with general and professional education produces more and better quality products than a low-skilled worker, masters complex operations faster, and participates more actively in the scientific and technical process in production. Thisacademic lyceumWithIt will serve as a basis for training specialists with a competitive profession.

LITERATURE REVIEW

Interdisciplinary connections are a key component of developmental learning theory**.** Implementation of interdisciplinary communication One of its main tasks is the development of students' thinking. In modern psychology, thinking is a socially conditioned, psychological

process of searching for and discovering something new and important, closely connected with speech, a process of generalized reflection of being through analysis and synthesis. Thinking arises from sensory cognition based on practical activity and goes beyond it [6].

Mathematical thinkingWhen we say, firstly, we mean dialectical thinking, which arises in the process of a person's knowledge of mathematics or in the process of applying mathematics to other sciences, technology, production, etc., and secondly, the methods that he applies in the knowledge of real being, determined by the nature of the mathematical sciences, as well as the general methods of thinking used in this [5].

The uniqueness of mathematics is that the study of this subject has a very strong influence on the development of students' thinking. Indeed, the development of their thinking in the learning process is inextricably linked with the formation of their ways of thinking. Methods of thinking (analysis, synthesis, generalization, abstraction, etc.) also act as special methods of scientific research, which are especially clearly manifested in teaching mathematics (especially when solving problems). There is no doubt that there is an organic connection between the education system and the intellectual development of students, which is subject to certain patterns, the search for which is currently one of the central problems of educational psychology. Research by psychologists and didacticians has shown that the development of students in the learning process is ensured by a didactic system called developmental learning. The main principles of this theory are two interrelated processes - learning and intellectual development [7].

In the study by I.S. Yakimanskaya [15, p.56], "education that ensures the full acquisition of knowledge, forms educational activities and thus directly influences intellectual development is precisely developmental education" [15, p.76]. We saw that by managing the process of teaching students, it is possible to significantly influence their intellectual development.

RESEARCH METHODOLOGY

In professional education, developmental learning should be based on the principle of the sequence of formation of educational, practical and production skills and training in accordance with the pedagogical logic of their acquisition. The creative focus of the learning process is based on the fact that during the transition from the general educational block to the general professional, and then to the professional, the knowledge obtained in the previous

block performs a heuristic function, which serves as the inevitable basis for their interrelation. The level of heuristic activity is defined as the level of productive motor activity in a non-standard situation [3]. At this level, the student's ability to solve specific problems is characterized by finding materials on the topic being studied and obtaining new information through independent search in unfamiliar situations. Here, the transfer of knowledge is limited to a certain class of questions and does not extend to the entire subject.

According to the theory of developmental learning, students' thinking is at its most developed when connections between knowledge in different subjects are rationally established. In other words, academic subjects should not be taught in isolation from each other[8].

Thus, the implementation of interdisciplinary connections in teaching is one of the components of developmental learning, which is manifested in the ability of students to systematize knowledge, transfer knowledge to solve new theoretical and practical problems, and solve practical problems.

In particular, as N. Rosenberg emphasizes [14, p. 18], interdisciplinary communication allows for a consistent analysis of industrial production technology and techniques, identifying organic interrelations of phenomena, processes, and methods studied by various scientific disciplines within the framework of a single object. Let us illustrate this idea using the example of the relationship between mathematics and technology, which is studied in professional colleges. Various devices in the technical industry are based on the immutable laws of electricity.

ANALYSIS AND RESULTS

When considering the substantive issues of technology in mathematics lessons, the teacher can and should rely on the students' knowledge of technology. At the same time, technology teachers should also rely on the students' knowledge of mathematics in their lessons. The following links will lead to materials from another topic that will be studied in the future. Let's give an example of implementing such a connection. For example, in mathematics the topic "Derivative of a function and its applications" is studied. To reveal the practical significance of this topic, the mathematics teacher can solve practical problems in lessons, since there is a lot of material demonstrating the use of derivatives in solving practical problems. However, the material that would reveal the practical significance of the derivative

in technology had not et been studied at that time. Therefore, when offering to solve a technical problem, the mathematics teacher should emphasize to students that the technical material will be studied later and for better assimilation it is necessary to study the derivatives of simple functions. When solving many practical problems, it is necessary to use a derivative to find the extremum of a function. By offering this task when considering the topic "Derivatives" in a mathematics lesson, the teacher develops students' skills and abilities in applying the acquired knowledge in practice. In this case, when solving a real problem, students explain the meaning and significance of the phenomenon under consideration from different points of view (mathematics and physics). Thus, students more consciously perceive various processes, phenomena, ideas, theoretical positions, technical concepts and approach the implementation of educational and industrial work with understanding. Only through such training can a system be formed from accumulated knowledge. To solve this problem, it is necessary to know geometric and physical data [9].

Geometry requires knowledge of the perimeter of the surfaces of a rectangle and a circle. Physics requires knowledge of the phenomena (laws) of light.

The classification discussed above allows teachers of mathematics (and other subjects) in professional colleges to implement interdisciplinary connections taking into account the time spent on studying the topics and sections of academic subjects.

In addition to the classification of interdisciplinary connections by time, there is another classification in which interdisciplinary connections are considered from the point of view of the commonality of leading ideas, theories, laws, concepts, evidence, objects, scientific methods, and educational and methodological approaches [10].

Interdisciplinary connections based on the study of one object in different academic disciplines and during industrial practice are conventionally called interdisciplinary connections.

For example, processes occurring in direct and direct current circuits are studied in courses in physics, mechanical engineering, special technology, and industrial training. All three cycles—general education, general professional, and specialized—study the same "subject."

Interdisciplinary connections based on the study of the same law (theory, concept) in different academic disciplines are usually called theoretical connections.

There are many examples of this type of interdisciplinary connections. In particular, the concept of the integral of a function is used not only in physics lessons, but also in industrial and vocational training classes [11].

The application of the same scientific formula (proof) to different academic disciplines is called methodological or instrumental connections.

For example, in physics, engineering, special technology, industrial training lessons, the method of approximate calculations, methods of mathematical statistics and other methods are also used. For example, in the problems considered above, methods of mathematics and physics are used (checking the maximum and minimum of a function using the derivative of this function).

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