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O’QUV JARAYONIDA MUAMMOLI TA’LIM TEXNOLOGIYALARIDAN FOYDALANISHNING PEDAGOGIK SAMARALARI

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Annotatsiya: ushbu maqolada dars mashg‘ulotlarida innovatsion usullarni qo‘llashning o‘ziga xos xususiyatlari, xususan ta’lim tizimiga yangi pedagogik texnologiyalarni hamda muammoli o‘qitish texnologiyalarini qo‘llashning ta’lim samaradorligini keskin oshirishga sabab bo‘luvchi omillardan ekanligi bayon qilinadi.

Kalit so‘zlar: pedagogik texnologiyalar, innovatsion usullar, pedagogik jarayon, ta’lim jarayoni, ta’lim tizimi elementlari, ta’limni loyihalash, muammoli o’qitish, muammoli savollar, muammoli vaziyatlar, muammolar banki.

ПЕДАГОГИЧЕСКИЙ ЭФФЕКТ ИСПОЛЬЗОВАНИЯ ПРОБЛЕМНЫХ ОБРАЗОВАТЕЛЬНЫХ ТЕХНОЛОГИЙ В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ

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Аннотация: в данной статье описаны особенности использования инновационных методов на занятиях, в частности, использование в образовательной системе новых педагогических технологий и технологий проблемного обучения, которые являются факторами, обуславливающими резкое повышение эффективности обучения.

Ключевые слова: педагогические технологии, инновационные методы, педагогический процесс, образовательный процесс, элементы образовательной системы, образовательный дизайн, проблемное обучение, проблемные вопросы, проблемные ситуации, проблемный банк.

TECHNOLOGIES IN THE EDUCATIONAL PROCESS PEDAGOGICAL EFFECT OF USING PROBLEM EDUCATIONAL

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Abstract: this article describes the features of using innovative methods in classes, in particular, the use of new pedagogical technologies and problem-based learning technologies in the educational system, which are factors that determine a sharp increase in the effectiveness of training.

Keywords: pedagogical technologies, innovative methods, pedagogical process, educational process, elements of the educational system, educational design, problem-based learning, problematic issues, problematic situations, problem bank.

Introduction. In the future, the need for modern experts in digital economy, artificial intelligence, online education, modern medical fields, automated design systems, e-commerce, robotics, and service industries, which are considered important for everyone, will naturally increase.

Today's task of education is to teach students to be able to work independently in the conditions of an information-educational environment that is increasing day by day, to effectively use modern information technologies in various fields and to use the flow of information wisely, for this they should be continuously it is necessary to create opportunities and conditions for independent work and to teach creative thinking and independent decision-making. The solution to this problem naturally depends on the professional skills of the main organizer of this process, that is, we - the pedagogues in the field of information technologies[1,2].

Today, there are many new methods and innovative technologies used in modern teaching processes. The use of which of them in which lesson is carried out by the teacher based on the content of the subject and educational goals. In this place, the teacher's research qualities should be demonstrated. In addition, it is not possible to recommend a specific teaching method.

In the teaching of information technology, the following methods of person-oriented education or their combination are more often used:

- game technologies;
- problem teaching;
- computerized teaching;
- modular training.

Methods. Let's take a closer look at one of these methods, problem-based learning technologies. This method has a great opportunity for conscious and solid assimilation of knowledge, determining one's active attitude to the environment, revitalizing students' cognitive activity[3].

Problem teaching is one of the most effective types of education, in which the logic of scientific knowledge demonstrates the logic of problem situations. The teacher creates a problem situation, directs the student to solve it, organizes the search for a solution. This requires skill and pedagogical knowledge.

Problem-based education is a type of training in which problem situations are created by the teacher and active independent activities of students are organized to solve them.

Problem-based teaching has a great opportunity for conscious and solid assimilation of knowledge, determining one's active attitude to the environment, revitalizing students' cognitive activity. An important aspect of organizing and conducting problem-based training is that the teacher must have a good understanding of both its educational and educational functions.

The teacher should never give the students a ready-made truth, but should motivate them to acquire knowledge, help them to process in their minds the information, events, time and events that are necessary in training and life activities. The teacher recommends such problematic questions and situations for subjects related to science that, firstly, they help to organize the lecture based on the problem-based teaching technology, and on the other hand, they help to organize the practical training based on small groups and debates. used in emergence[4].

It is a very responsible task to develop such a "bank of difficult tasks" on the topics of each subject, they should be meaningful and interesting, and lead to the awakening of enthusiasm and motivation in the student to master the topic. it should encourage the student to think creatively and, as a result, generate new ideas. A similar situation exists in some foreign experiences. For example, in modern education, some experienced pedagogues create a bank of problematic questions from their subjects. They are of different complexity. In order to fully master this science

module, each student must be able to solve a certain percentage of this bank of problems.

The following forms of problem-based teaching used in the course of the lesson are common [5]:

- ✓ Creating a problem situation in the form of a question, experiment. Solving the problem.
- ✓ Research, search, experience, description of assignments.
- ✓ Setting defining tasks and clarifying them
- ✓ Creating situations that compare, generalize, draw conclusions.
- ✓ Creating a problem situation by giving comparative tasks to improve the problem process.
- ✓ Creating a problem situation by offering tasks to apply knowledge in practice.

Results. In teaching information technologies, it is very useful to create problem situations in each cognitive process and to stimulate the desire to solve them. In particular, "Is it possible to completely prevent the negative aspects of using a computer device? ", "What needs to be paid more attention to in order to fully meet the needs of technical tools in the future?", "What other tasks would you assign to the service system programs?", "How to quickly identify the failure of internal devices. li?", "Which tasks do you need to know in order to be efficient when using practical programs?", "How can I do it faster?", "Do you think it is necessary to develop an algorithm to create a program?" , "If you had to choose a programming language to learn, which one would you choose?" such as [6].

A problem without an answer! This game technology shows that it is possible to develop a bank of problematic questions even by students.

Applying the method:

• initially, the activities of small groups are formed;

• each group is required to compose questions from the problematic situations they have encountered within the framework of today's topic;

• questions are answered by groups;

• an unanswered problem question deserves encouragement;

all group members who compose the question will be evaluated additionally.

Discussion.

Expected results from using the method [5-6]:

- students need to pay attention to aspects that no one has "progressed" during practical training, which leads to the formation of deep knowledge;
- students will have the opportunity to exchange experience on acquired practical skills during interaction;
- mutual thinking and debates form consensus and friendly relations;
- students improve their critical thinking and independent decision-making skills;
- finally, the training ends interestingly and effectively due to "coincidences".

Conclusion. If we consider the educational process as a whole system, then the constituents of this system, that is, the sub-system elements, include the following main elements: the purpose of education, educational goals (expected results), the teacher , learner, educational content, educational method, educational form, educational tools, control and assessment. When designing the educational process, even if one of the above-mentioned elements fails or is neglected, or is incorrectly selected, the system will not work, which means that the goal set for the educational process will not be achieved.

The essence of interactive teaching is to organize the educational process in such a way that all students are directly involved in the learning process and have the opportunity to think freely, analyze and think logically.

In short, a correctly applied teaching method can achieve the above-mentioned results and significantly increase the effectiveness of the lesson. It should be emphasized that if we can teach students to work actively and independently, we will be able to educate enterprising people.

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