INNOVATION PROCESSES IN EDUCATIONAL SYSTEM

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Abstract

In this article, we explore innovative pedagogical technologies as modern methods and means of teaching in the education system . It is shown that innovative pedagogical technologies not only create the basis for the competitiveness of any institution in the educational services market, but also make it possible to intensively develop the personality of a teacher and a student, democratize the interaction and communication of a teacher and a student, humanize the educational process, focus students on active learning and self-education, professionalism of teachers. and so on.

Keywords: Innovative pedagogical activity, informatics, innovative activity , innovative educational activity, special courses, qualifying practice

Introduction

The introduction of innovative pedagogical technologies into the educational process orients teachers towards creative search. To do this, the computer science teacher should *determine the purpose of training* at each lesson - why, for what purpose, *determine the content of education - what to teach, determine the form* of education - theoretical, practical, laboratory, how to organize independent learning. how *to determine the means - how to organize* the session, how *to determine the results achieved - how to organize assessment using* tests (oral questions, written work, project development, etc.).

Innovations are aimed at ensuring the continuity and succession of informatics. The main task of the education system today is to help students become a strong state that loves our country, relying on its knowledge and talent and independently acquiring knowledge using modern ICT, we are talking about raising a healthy, comprehensively developed and healthy person [1] . Also computer science continuity and continuity of training is also based on this principle. In our country, the types of education in the field of informatics are continuous, including pre-school education, general secondary education, secondary specialized, vocational education, higher education, postgraduate education, advanced training and retraining of personnel and out-of-school education. It is known that the process of continuous education will increase the interest of students in the profession, form a circle of innovations aimed at ensuring the continuity and succession of informatics on the example of preparing a future teacher of informatics [2, 3] . Activation of educational activities in informatics is a purposeful, purposeful learning process that occurs in the learning process. Concepts such as activities, activities and learning activities form the basis for the activation of learning activities. While the activation of educational activity consists in the effective mastery of knowledge and methods of activity, the educational material becomes the product of the active mental movement of each student [1]. To date, a number of developed countries have extensive experience in the use of pedagogical technologies that increase the educational and creative activity of students and ensure the effectiveness of the educational process. The psychological and didactic requirements for the activation of educational activities in informatics include:

➢ ensuring the unity of educational, educational and developmental tasks in the process of teaching computer science;

➢ didactic principles of education: scientific, systematic, consistent, conscious, active, differentiated, practical, professional orientation in education, strengthening the connection of scientific, collective and other educational activities;

➢ the formation of tension and emotional environment in the learning process;

➢ to establish the use of various methods and means of teaching, focusing on the activation of the educational activity of students, creative activity;

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➢   direct students to systematic independent learning, establish constant, continuous monitoring, control, assessment of knowledge of the educational process;

➢   to stimulate the educational and creative activity of students;

➢   to familiarize students with the structure, sequence and content of tasks that activate the learning process, etc.

❖   The main task of the teacher in enhancing the learning activities of students in the learning process is to create means of activating students. If it is possible to create an activating tool for students, then for this it is necessary to consider the following basic rules:

❖   the choice of activation means that ensure the activity of students at each stage of the learning process within the framework of the learning objectives (educational, pedagogical, developmental);

❖   ensuring the integrity of the education system;

❖   identify the relationship between the elements of the education system (goal, content, form, method, means and means of managing education) and with each other in the system of means (technical, didactic means, etc.) and activation;

❖   Each component of the education system plays a role in activating students: motivation, fast delivery of material, direction, willpower and assessment;

❖   taking into account the fact that the content of education as a component of the education system, methods, forms of organization of educational activities to a greater extent contribute to the activation of students, etc.

In conclusion, we can say that the organization of the educational process on the basis of the activation of the educational activity of students solves the problem of personal activity and brings the activity of students closer to the level of the teacher's activity.

Game learning technology **.** A game is a type of human activity used in the educational process to develop skills and abilities by performing various actions with an object in various situations. The game can be divided into computer, simulation, sports, economic, military, business and entrepreneurial and can be used directly in the educational process. The game is the most free, natural form of initiation into real (or imaginary) reality with the aim of studying a person, manifesting his "I", creativity, activity, independence, self-realization.

Problem-Based Learning Technology . Problem-based learning is learning that serves to develop learner skills and competencies such as creative exploration, small research, making certain assumptions, justifying results, and drawing certain conclusions.

Communicative learning is a method of teaching students based on communicative communication (oral communication, initiative). These include brainstorming, debates, talk shows, and other technologies to develop students' conversational skills. As a result of the analysis of technologies for enhancing the educational activity of students in teaching computer science, we found that when using these technologies, the following requirements must be taken into account:

➢   formation of motivational activity among students:

➢   the formation of cognitive activity of students, the development of individual abilities;

➢   ensuring the active participation of each student in the group in the learning process;

➢   ensure the active participation of students in the performance of assigned independent work, etc.

Student-centered educational technologies in teaching computer science. When using student-centered learning technologies in teaching computer science, students are no less active than the teacher, and attention is paid to the development of students' personal abilities. in the development of the curriculum. In the course of his activity, the educator must take into account the integrity, individuality, originality of the human personality, as well as the emotional, emotional, aesthetic, spiritual, creative potential of the student's personality [2] .

The goal of learner-centered learning is to create conditions for students to achieve individual activity and the ability to fully perform the following tasks:

❖   formation of the ability to choose (the most optimal of the available);

❖   to teach students to evaluate their own lives, activities, abilities;

❖   to teach a student to look for the meaning of his life, to be creative (-Who am I? -What can I do? -Who will I be in the future? -How will I live? Etc.);

❖   autonomy of the student's personality: self-control, self-determination, responsibility for behavior, emotions, the ability to make their own conscious decisions.

In the process of teaching informatics, the teacher should be a "source of information", "supplier of information", "supervisor", diagnostician, and also ".... an assistant in the student's independent work". The technology of student-centered learning should take into account in training, education and development, taking into account the individual characteristics of all students:

✓ taking into account the physiological, psychological, age characteristics of students;

✓ achievement of different levels of educational needs, the level of complexity of materials delivered to students;

✓ take into account the knowledge and skills of students when dividing into groups ;

✓ formation of a group of students with the same, close knowledge, characteristics;

✓ achieve the formation of an individual, unique attitude towards each student in the group, etc.

➢ identify the subject characteristics of the student (independence, individuality, curiosity, etc.), the use of various methods and teaching aids;

➢ taking into account not only the final result (correct or incorrect) in the assessment of the student, but also his attempts and actions when completing the task;

➢ to achieve the selection of the most convenient for students in the preparation and selection of didactic materials;

➢ allow students to present what they have learned in a variety of ways (verbal, hands-on, drawings, slides, lectures, notes, projects, etc.);

➢ create a pedagogical situation in the classroom, encourage each student to show independence, initiative, ingenuity when completing a task;

➢ enable students to naturally and sincerely express their opinions, etc.

According to Professor Yu.V. Bondarskaya, when organizing student-centered learning, the following requirements must be taken into account: dialogism, creative activity, support for individual development, purposefulness, freedom in making personal decisions, freedom of choice and expression of content, purposefulness. about a creative approach, etc. Based on the above requirements, student-centered learning technologies may include:

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- ➢ collaborative learning technology;
- ➢ Game technology;
- ➢ Technology of problem learning;
- ➢ human-personal technology;
- ➢ programmed learning;
- ➢ modular learning technology;
- ➢ technology of self-development.

Collaborative Learning Technology learning, reflecting the joint acquisition of knowledge by students in a team, small group and pair, mutual development, joint organization of teacher-student relationships, the main of which is the idea of performing educational tasks in a team, in small groups or in pairs, together. Also, the main idea of this technology is to read and study together, not to do the task together. Collaborative learning promotes the student's conscious discipline by acknowledging their success as group success, diligently completing assignments with their peers, collaborating with peers, helping each other, and finally engaging in honest mental work. solidarity.

Game learning technology . A game is a type of human activity used in the educational process to develop skills and abilities by performing various actions with an object in various situations. The game can be divided into computer, sports, economic, military, business and entrepreneurial and can be used directly in the educational process. An example of the use of gaming learning technologies in teaching computer science is the process of explaining the topic of the main and auxiliary devices of a computer, organizing group games on topics such as "The fastest operator", "Who is the fastest programmer". . ?", "Who is the fastest programmer?" it is also possible to organize a performance in a game form and other forms, which will depend on the creativity of the computer science teacher and his work on himself.

Problem-Based Learning Technology . Problem-based learning is learning that serves to develop learner skills and competencies such as creative exploration, small research, making certain assumptions, justifying results, and drawing certain conclusions.

Programmed learning originated in the early 1950s. We can give the following definition of programmed learning, that is, programmed learning is the management

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of the assimilation of programmed educational material using teaching aids: computers, programmed textbooks, movie simulators, etc. To date, the development of electronic software tools, the introduction of which into education can be an example of programmed learning [4].

Developing education in teaching computer science. Today, one of the main tasks of a teacher is to teach students not to think in a certain way, but to solve a problem, *Developmental education* - specially organized educational activity using scientific and creative methods, independent creative activity and a system of general scientific technologies, aimed at developing the theoretical thinking of students [5]. At each lesson and for each subject there are three main *educational, educational and developmental* pedagogical functions. a) The educational task is not to memorize educational information materials without understanding, but to highlight educational information, taking into account the main features, patterns and rules. For example, depending on the capabilities of office programs, you should use MS Word to create documents, MS Excel to create tables and charts, create a database, flash drive, permanent memory or SD, DVD drive, etc.

b) In *the developing* task, the creative activity of students at all stages of educational activity, aimed at mastering the methods of scientific creativity, is aimed at completing individual tasks and searching for their own mistakes.

d) *The educational function of developmental learning* is to teach students about social creativity, problem solving, design and forecasting, ensuring a high level of cooperation and interaction between students. Thus, developmental education is education that leads students to general and special development, in which special pedagogical means are used to form the mental abilities and cognitive needs of students.

Technologies for the development of critical thinking in teaching computer science. The technology for the development of critical thinking in pedagogy was proposed by American psychologists. The purpose of critical thinking development technologies is to develop the mental abilities of students, which are necessary both in the learning process and in everyday life. It is also the collection of information for making personal decisions, working on them, analyzing information and events from different angles (good-bad, good-bad, positive-negative, right-wrong, etc.). As a result of the development of critical thinking, students are able to analyze events

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occurring in everyday life, both positive and negative, useful and harmful. According to M: "Only when students begin to deal with a particular problem, do they develop critical thinking. Therefore, at the starting point of the learning process, it is necessary to create a problem corresponding to the topic, ask a problem task or questions, and only when the student is struggling with a particular problem and looking for his own way out of a difficult situation, the reader really thinks. For example, if a teacher instructs a student to create a program for a problem in a linear program, the student can create a program to find similar problems, create a program, get a solution, and solve the problem in a variable. instead, give an example of how they themselves make decisions about what is right and what is wrong.

A course based on technologies for the development of critical thinking differs from a traditional lesson. In the lesson, students are not passive, but are the main characters, reading, reflecting, researching, writing down if necessary, discussing, analyzing, discussing, defending what they have read with each other. The role of the teacher is to lead and coordinate.

The use of technologies for the development of critical thinking in teaching computer science in the classroom gives students the following results:

➢ improves the reception and perception of information (correct, incorrect, good, bad, etc.);

➢ increases interest in the material being studied and the learning process;

➢ develops the process of critical thinking;

➢ develops the ability to work with peers;

➢ ensures that students receive a quality education.

➢ creating an atmosphere of openness, transparency and responsible cooperation in the classroom;

➢ critical thinking in the learning process develops the ability to use methods that promote independence

➢ contributes to the creation of a valuable resource for other educators .

Requirements for development technologies. The use of technologies for the development of critical thinking in teaching computer science in the classroom imposes the following requirements on the teacher:

➢ orientation to the formation of students' skills of self-transformation when setting the tasks of teaching natural science disciplines;

➢   identify and convey to students a system of scientific concepts that provide meaningful research and practical skills of students in the context of educational topics;

➢   Divide students into different subgroups in the class, give appropriate tasks, and during the tasks, have an interactive dialogue.

➢   make the teacher's motto "Think, find and do" in the lesson;

➢   become a leader, consultant, co-organizer of the educational process in the classroom;

➢   motivate students in the classroom, motivate them to be active, form interactivity, etc.

➢   focus on the teacher in the classroom, try to be active;

➢   boldly state what has been studied previously;

➢   in cooperation with classmates to be able to ask the teacher what they do not understand and do not know;

➢ timely, conscientious completion of tasks, independent thinking, independent decision-making, analysis of the opinions of colleagues, active participation in negotiations, discussions, etc.

CONCLUSION

In conclusion, we can say that the organization of the educational process on the basis of the activation of the educational activity of students solves the problem of personal activity and brings the activity of students closer to the level of the teacher's activity.

REFERENCES
1. Herbert, T.P., Reis, S.M. (1999). Culturally diverse students in an urban high school. City Education, 34 (4) , 428457.

2. Holland, A., Andre, T. (1987). Participation in extracurricular activities in secondary schools: what is known, what should be known? Educational Research Review, 57 (4), 437466.

3. Balin A.V. Use of innovative methods in education. Young Teaching. - 2014. - No. 2. - S. 724-725

4. ON THE. Tailanov, "Teaching physics to non-physicists in the system of a comprehensive school", scientific and methodological journal "Akliy marifat": V. 1, 22, 2022,

5. Vodzinsky D.I. Educational activities outside the classroom. M., 1961. 235 .

6. Golub G.B., Perelygina E.A., Churakova O.V. Technology of the project method of competence-based learning: Samara: Educational Literature Publishing House, Fedorov Publishing House, 2006. 176 p.

7. Zimnyaya I.A. Key competencies as an effective basis for a competency-based approach in education - 20 6 1 - No. 3 (6).

8. Machekhina O.N. Social competence of high school students. - 2011 - No. 37 (1).