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NON-TRADITIONAL APPROACHES TO TEACHING MATHEMATICS

Dilbar Oral kizi Eshmominova
Mathematics teacher, №12 specialized state secondary school of Termez district, Surkhandarya region

ABSTRACT

It is advisable to use different educational technologies in order to teach effectively. This article discusses non-traditional approaches to teaching mathematics.

Keywords: mathematics, non-traditional education, educational technologies, pedagogical skills.

INTRODUCTION

An activity called an innovation is one in which the activity of updating a system is short-lived, integrated, and serves only to change certain elements of the system. When an activity is carried out on the basis of a certain conceptual approach, the result of which contributes to the development of a particular system or its radical change, it is called innovation. In other words, innovation is the activity of changing the internal structure of a particular system.

Innovative approach to education, which allows the learner to create new ideas, norms, rules, advanced ideas created by others, qualities related to the natural acceptance of norms, rules, the formation of skills called lim. The technologies used in the process of innovative education are called innovative educational technologies or educational innovations. Educational innovations are forms, methods and technologies that can be used to solve a problem in the field of education or the learning process on the basis of a new approach and guarantee a more effective result than before. Improving the effectiveness of education facing the education system today through the introduction of educational innovations at the level of world educational standards and the introduction of educational innovations, comprehensively mature creative spiritually rich, professional, national and national universal values. The pedagogical staff of educational institutions, especially each science teacher, must radically change its pedagogical activity in solving such tasks as the development of a harmoniously developed person, brought up in the spirit of the idea of independence.

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MATERIALS AND METHODS

In accordance with the requirements of the times, every science teacher is well aware of modern pedagogical and information technologies that enhance the effectiveness of the educational process, deeply mastering their pedagogical, psychological and methodological knowledge, skills and abilities. have the ability to apply them in the educational process, as well as be the owner of innovative activities. Each lesson requires a unique innovation, a creative approach from the teacher. The teacher is currently the author of each lesson. Because the teacher relies on the experience of advanced teachers in the preparation of this lesson, learns the manuals, and so on. In mathematics, all the elements of the educational process are intertwined. They are inextricably linked with the purpose and content, tools, methods, forms of education. In non-traditional education, 4 components are implemented in combination. These are purpose, content, activity, result.

So, the main features of a modern mathematics course are:

- conformity of the course to the requirements of the program;
- clear planning of the objectives of each lesson;
- ensure the distribution of learning materials in the classroom and achieve the planned learning outcomes;
- ensuring that students work actively in the classroom without being overwhelmed;
- focus on students' interest in science and the process of acquiring knowledge, etc.

Based on the above requirements, the following are examples of non-traditional educational approaches to teaching mathematics:

A person-centered approach to education. Many literatures devoted to pedagogical-psychological and subject-based teaching methods focus on the person-centered form of individual education, which helps to develop as a person, taking into account the interests of developing the student's ability to reveal individual characteristics. education. In essence, this education involves the full development of all participants in the educational process. This means that when designing education, of course, the approach should be based not on the personality of a particular learner, but primarily on the learning objectives related to the professional activity.

RESULTS

While acknowledging that all the methods used in the educational process are person-centered, we also call the method of educational impact on the individual

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student a method of person-centered learning. Understanding and understanding each other is the foundation of person-centered learning. Explaining the basis of traditional education, the differences between these concepts are interpreted as follows: explanation - a single subject, monologue; understanding is the understanding, cooperation, dialogue of two subjects. The basis of person-centered education is the transition from explanation to comprehension, from monologue to dialogue, from social control to development, from management to self-management. The educator should not make students know the science, but make them collaborate and show creativity. Pedagogical support of the student should be the main task of the teacher. The student does not have enough creative research, experience, opportunities and potential to study the problem. Needs teacher advice and help.

Foreign psychological research emphasizes that the role of the educator is in the formation and development of the child's personality. According to K. Rodgers, in order to create an environment in the classroom that affects the individual development of the student, the teacher must:

- show full confidence in students during the learning process;
- assist each student and class in identifying and articulating goals and objectives;
- based on the presence of internal motivation in students;
- for each student, the teacher has a variety of district experiences, a source that can always be accessed when needed;
- the teacher always feels and accepts the spirit of the group of students;
- be an active participant in group interaction;
- express their feelings openly;
- to understand the feelings and experiences of each student;
- self-awareness.

A teacher who organizes person-centered education must meet the following requirements:

- respect for the child, culture and creativity;
- demonstrate a humane pedagogical attitude;
- mental and physical health of the child;
- creation and constant enrichment of educational-developmental and cultural-informational educational environment;
- improving the content of education in the formation of the student's personality;

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- mastery of various pedagogical technologies that serve the formation and development of the student's personality;
- support and develop each student's unique personality.

Collaborative learning approaches. The technology of collaborative learning was developed by American educators in the 1980s, which led to many innovations in the educational process. They summarized and researched the best practices of a number of school representatives. The organization of collaborative education means the need to focus on democracy, equality, the introduction of collaboration in the subjective relationship between educator and learner, the formation of goals and content of activities, and the evaluation of the results achieved. This pedagogical technology is part of many modern pedagogical technologies as a source of new pedagogical thinking, progressive ideas. The idea of collaborative learning is not just to work together, but to study together.

DISCUSSION

Classification description of collaborative learning technology:

- general pedagogical according to the level of application;
- philosophically humane;
- complex according to the factor of development: bio-, socio-, psychogenic;
- associative, reflective, step-by-step on the basis of mastering;
- educational, pedagogical, humane, general, secular in content;
- system of subgroups by type of management;
- according to the organizational form - academic, individual, group, stratified;
- personal-humane, subject-subject according to the child's approach;
- according to the managerial method - problem-research, creative, controversial, playful;
- mass according to the level of learners;
- focused on collaborative pedagogy;
- transition from demand pedagogy to relationship pedagogy;
- unit of education and upbringing. The main idea of collaborative learning technology is to create conditions for students to actively work together in different learning situations.

CONCLUSION

Students' ability to master the material varies: some are quick to grasp the teacher's explanations, and some require additional time and explanatory work. Such

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students become passive during the lessons. If students are divided into groups of 4-5 and each participant is clearly assigned a task, then each student will feel responsible for the task assigned to them and the group task. In this case, low-achieving students ask for help from advanced students. Problems arising in cooperation are solved.

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