MODERN AND DIDACTIC TEACHING PRINCIPLES AND METHODS USED IN MATHEMATICS EDUCATION

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Annitation: The main goal of the article is to create a general picture of the teacher-student relationship, which is the basis of the pedagogical process in accordance with the curriculum proposed by the modern education system. Here, the completeness of the pedagogical process forms the basis of a student-oriented, development-oriented education system.

Key words: student, student, education, methodology.

The training process is constantly evolving. It has a unique character at different times. The functions of teachers and students, who are at the center of the pedagogical process, are changing in the personality-oriented education system. Their activities are based on predetermined results. Along with the integrated plans according to the curricula, the teacher develops, acquires new technologies, or chooses the most suitable among the existing ones. In determining these technologies, the personality of the teacher and student acts as the leading subject of training. Relationships are established in the horizontal direction according to the form "subject + subject". At this time, students become the organizers of their own thinking and thinking, and teachers are the organizers of the conditions for student development. The leadership function of teachers is changing, their activity in the field of providing information is limited. He becomes a subject who organizes independent cognitive activity and active creativity of students as a consultant who coordinates and directs learning activities in classroom conditions. Important principles are referred to in the organization and proper construction of the pedagogical process.

The pedagogical process in accordance with the new curricula is established based on the mutual cooperation activities of teachers as coordinators, guides, consultants, and students as researchers, experimenters, and creative subjects in order to achieve predetermined results, taking into account the following principles:

The completeness of the pedagogical process - in the pedagogical process, the set of training goals (developmental, educational, educative) is implemented, it includes teacher and student activities that culminate in real results.

Creating equal opportunities in training - all students are provided with the same training conditions and the pedagogical process is regulated taking into account their potential capabilities.

Student orientation - the student is at the center of the pedagogical process. All teaching and learning work is aimed at meeting the interests and needs of students, developing their talents and abilities, potential opportunities. t

Development orientation - students' cognitive activity is monitored, their achievements are analyzed, and the level of development of their knowledge, skills and habits is regulated.

Stimulation of activity - efficient and effective construction of the pedagogical process, all progress in the activity of students is noted and evaluated in order to increase their interest in learning, as a result, it is ensured that students are directed to more successful learning results.

Creating a supportive environment - organizing the pedagogical process on the basis of a suitable material and technical base and in a healthy spiritual and psychological environment creates favorable and safe training conditions for improving quality and efficiency.

It is considered didactically important to define special methodical principles along with these principles in the teaching of individual subjects.

On the basis of school experience, the pedagogic science has worked out such issues arising from the basic regularities of didactics, which give a strong impetus to the effective teaching of individual subjects, including mathematics. Such a system of issues is essentially a set of single requirements that ensure the teaching of any subject and are called didactic principles. Didactic principles are considered as important requirements for the organization of the content, forms and methods of the educational process. The following didactic principles are put forward in the traditional methodical literature on mathematics:

1. The principle of science and efficiency in mathematics education;

2. The principle of education in mathematics education;

3. The principle of visuality;

4. The principle of awareness, independence and activity;

5. The principle of strengthening knowledge;

6. The principle of systematicity and consistency;

7. The principle of individual approach.

1. The essence of the principle of scientificity is that the content and methods of teaching correspond to the requirements and level of modern mathematics. In the principle of effectiveness, the age and knowledge levels of students are taken into account, that is, the following requirements are met:

a) from simple to complex;

b) from easy to difficult;

c) known to unknown.

2. Education in education means to develop the student's outlook in a planned and purposeful way, to achieve a correct understanding of natural and social events. Educating in the training process means forming interest in this subject in students, trying to acquire solid and stable knowledge.

3. The principle of visuality - arises from the student's imagining, understanding and assimilation of the studied material. At different stages of training, visibility performs different functions:

a) can gain knowledge by considering the object itself or its image while studying the properties of the object.

b) if the didactic goal is to study the relationships between the properties of the object, it specifies and illustrates the concepts in order to understand the relationships.

4. The principles of awareness, activity, and independence are determined by the purposeful understanding, creative processing, and application of the studied phenomena or laws. In this case, the following conditions must be met:

a) The cognitive activity of students should be consistent with the content of the learning process;

b) Referring to the thinking activity of the student in the training process;

c) Understanding of the training process by the student;

d) The ability of students to use mental activity methods in understanding new material.

5. The principle of strengthening of knowledge is determined both by the tasks facing the school and by the regularities of the training process. The conditions for strengthening knowledge in didactics are expressed as follows:

a) being active in acquiring knowledge for the purpose of conscious assimilation;

b) Scientific training:

c) Creation of appropriate conditions for memorizing educational material.

6. The principle of systematicity and consistency is determined by the teaching characteristics of the subject, its logical structure, the student's thinking and practical activity. This principle implies consistency and gradual mastery in the development of mathematics curriculum and textbooks. The principle of systematicity directs the systematic study of knowledge. The principle of sequence is that training is carried out in the following order:

a) from simple to complex;

b) from easy to difficult;

c) known to unknown;

d) from imagination to understanding;

e) from knowledge to ability;

e) from skills to habits.

7. Taking into account the characteristics of an individual approach to each student in training makes learning more effective.

The teaching principles that we have briefly discussed are the purpose, characteristics, etc. of the subject in the RT process in traditional teaching. it is applied purposefully, depending on the facts.

The result

In the general theory of learning and teaching methods to increase the effect of mathematics education, it occupies a central place. In order to solve the multifaceted educational issues of modern higher and secondary schools, it is necessary to take a complex and systematic approach to the preparation of the methodical system of training and its use. The methodical system means the goals, content, methods, means and organizational forms of training. Various training methods are applied in the process of forming the mathematical concept and in the process of solving the mathematical problems that arise when using them in practical teaching activities.

Literature

1. M.Sh. Hajiyev. Mathematics teaching methodology (general methodology, textbook for mathematics and mathematics-informatics majors). Nakhchivan 2017, 200 pages.

2. F.N. Ibrahimov. Lectures in general pedagogy, Baku, 2010, 390 pages.

3. S.S. Hamidov Methodology of teaching mathematics in elementary school classes. Baku, ADPU, 2008, 332 pages.

4. S.K. Mammadova. A textbook on the general methodology of teaching the elementary course of mathematics. Baku, "Science and Education", 2017, 130 pages.