

Issues of Implementation of Innovative Technologies in Science and Education

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Abstract: This article describes about the importance of innovative educational technologies in advanced educational conditions. Information was also given on ways to make education more effective, and how to use modern technologies during the lesson.

Keywords: interactive methodology, innovative education, innovation, pedagogy technology, information technologies, traditional education.

The development of education brought a new direction-innovative activity to the field. By the 21st century, which is considered to be the age of information and advanced technologies, the attention to the issue of the wide introduction of innovation in the educational process has increased. In Uzbekistan, in recent years, innovation has entered the education system as one of the first compared to other fields. Organization and management of the educational process in the educational institutions of our country based on innovations is required by the times. There is a great need for innovative education in the scientific methodical management of the educational institution. Innovative and non-traditional educational methods give a positive result in the practice of pedagogical processes compared to the educational system managed traditionally.

Currently, the interest and attention to the use of interactive methods, innovative technologies, and pedagogical and information technologies in the educational process is increasing day by day, one of the reasons for this is that until now, traditional education If in lim students are taught to acquire only ready-made knowledge, modern technologies teach them to search for the acquired knowledge by themselves, to study and analyze independently, and even to draw their conclusions. In this process, the teacher creates conditions for the development, formation, learning, and upbringing of a person, and at the same time performs the functions of management and guidance. In the process of education, the student becomes the main figure. Therefore, modern teaching methods - interactive methods, and innovative technologies play an extremely important role in the training of qualified professionals in higher educational institutions and faculties. Knowledge, experience, and interactive methods of pedagogic technology and pedagogic skills ensure that pupils-students have an educated, mature qualification. INNOVATION (English innovation) is innovation, innovation. Innovative technologies are introducing innovations and changes to the pedagogical process and teacher and student activities, and mainly interactive methods are fully used in its implementation. Interactive methods are called collective thinking, that is, they are methods of pedagogical influence and are a component of educational content. The uniqueness of these methods is that they are implemented only through the joint activity of pedagogues and students. Such a process of pedagogical cooperation has its characteristics, which include:

- Forcing the student not to be indifferent during the lesson, to think independently, to create and search;
- Ensuring that pupils-students are constantly interested in knowledge during the educational process;

- Increasing the student's interest in knowledge independently with a creative approach to each issue;
- Organization of the pedagogue's and student's activities in cooperation.

In the opinion of teachers, researchers, and practitioners studying the issues and problems of pedagogical technologies, pedagogical technology is only related to information technology, and it is necessary to use TSO, computer, and distance learning in the teaching process. or defined as the use of different techniques. In our opinion, the main basis of pedagogical technology depends on the technologies selected for the cooperation of the teacher and the student-student to achieve a guaranteed result from the set goal, that is, used in the process of teaching to achieve a guaranteed result according to the goal each educational technology can organize cooperative activities between the teacher and the student, both can achieve positive results, if the students can think independently, work positively, search, analyze during the learning process if they can, if they can make their own conclusions if they can evaluate themselves, the group, and the group can evaluate them, and the teacher can create opportunities and conditions for such activities, in our opinion, this is the basis of the teaching process. Each lesson, topic, and educational subject has its technology, that is, the pedagogical technology in the educational process is an individual process, which is directed to a goal based on the needs of the student. is a pedagogical process aimed at providing a planned and guaranteed result? Law of the Republic of Uzbekistan "On Education". Innovative pedagogical technologies in the implementation of the "National Personnel Training Program". The fact that technologicalization of pedagogical activity is a social necessity, technologicalization of pedagogical activity is a social necessity. arming future teachers with knowledge of the theoretical foundations of modern pedagogical technologies; having the necessary skills to effectively organize pedagogical processes at a new pedagogical level; the ability to find a way in modern pedagogical technologies, schools, directions, a wide variety of ideas; formation of readiness to creatively and methodically perform pedagogic activities; it was said that it is necessary to activate independent work, independent education, self-education, and the desire to constantly improve one's professional level.

The introduction of innovation into the system of pedagogical sciences was determined by the following.

a) Gender pedagogy; b) Heuristic pedagogy; c) Mandatory pedagogy; g) Androgogic pedagogy

- We see the introduction of active, passive, and interactive methods of innovation into teaching methods. If the use of the active method serves to increase the activity of students in the course of the lesson, the passive method is explained by giving students a one-sided understanding. The interactive method is understood as active action together (teacher and student, student and student).
- We can see the introduction of innovation into the form of lessons in the example of standard, non-standard, and virtual lesson forms.
- There are types of innovation in teaching types: problem-based learning, heuristic learning, graded learning, integrated learning, interactive learning, informal learning, formal learning, and non-formal learning.
- Multimedia, electronic boards, and other tools can be used as an example of innovation in teaching tools.

The requirement of modern education is not to give students as much knowledge as possible but to teach them to learn on their own, not only to know but also to be able to work with the received information.

Pedagogical innovations are based on two main approaches: The student-centered approach involves directing the educational process to each student. Modern pedagogy should consider the unique experience and character of each student, and develop his individuality and talent.

In our opinion, the first main criterion depends on the environment in which the innovation will be implemented. The second criterion is the ways of applying the innovation, the third is the breadth and depth of the innovation introduction measures, and the fourth criterion is the reason for the creation of the innovation.

Depending on which field of education innovations are introduced and applied, the following innovations can be included in the first criterion: 1) in the content of education, 2) in technology, 3) in organization, and 4) in the management system. Regardless of the ways of introducing news, they can be divided into:

a) systematic, planned, premeditated;

b) unexpected, spontaneous, sudden. Irrespective of the breadth and depth of the activities of the introduction of news, the following types can be listed:

a) public, large, global, systematic, acute, reasonable, important, serious, deep, etc.; b) partially, small, tiny.

Depending on the nature of the news, they can be combined as follows: a) external and b) internal.

in short, using these innovative technologies, the above-mentioned features determine a high level of student interest, as a result, the effectiveness of the educational process increases, gaining deep knowledge, creating new ideas, free-thinking, and vocabulary are achieving effective results in increasing their scientific potential.

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