



WAYS TO INCREASE EDUCATIONAL EFFICIENCY IN BIOLOGICAL SCIENCE TEACHING

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Abstract: This article discusses ways to increase the effectiveness of teaching biology. The new conceptual pedagogical technology of knowledge acquisition in the current education system and ways to organize students' learning activities in order to increase the effectiveness of education in the teaching of biology are analyzed.

Keywords: biology, new conceptual pedagogical technology, technology, method, cognitive activity, modern education

Introduction

After Uzbekistan gained independence, the attention to education increased even more. Currently, the modern education system is used, and modern education in biology is an unconventional way of organizing lessons, and its important feature is achieving a clear, effective goal. Unlike traditional educational technology, non-traditional educational technology creates conditions for the development of students' cognitive abilities, special attention is paid to their independent work, cognitive activities have a searching and creative character.

It is known from biology that our ancestors also conducted a number of researches on the improvement of education based on pedagogical technologies. The great scholars of the East, such as Musa al-Khorazmi, Ahmed al-Farghani, Abu Nasr Farabi, Abu Rayhan Beruni, Mirza Ulugobek, have emphasized in their works that they attach great importance to the use of various methods and means of teaching in schools and madrasas to bring people to intellectual maturity.

In the current educational system, the new concept-pedagogical technology of acquiring knowledge - the use of methods of non-traditional educational technologies. Non-traditional educational technology: It is divided into collaborative learning, modeling, research (project) technologies, and it is carried out on the basis of an integrated system. The main concept of pedagogical technology, without a word, is to approach the educational process as a system. The non-traditional teaching method is the basis of cooperation between the teacher and the learner for the realization of the educational goal.

Methods: ensure the achievement of the intended results that the learner should know, understand and value. In this case, all things and events involved in education are functionally interrelated and form a whole, that is, a set of pedagogical processes.

LITERATURE ANALYSIS AND METHODS

We are analyzing and studying the ways to increase the effectiveness of education in the teaching of biology. Our biological thinkers explained the organization of effective ways of the educational process as follows:

Ibn Sina attached great importance to the issue of teaching and educating a child at school, and devoted a special section of his work "Tadbir ul Manozil" to this issue. In the section of the book "Education and upbringing of a child at school" it is discussed about attracting a child to school. He emphasized that children of all people should be involved in the school and all children should be taught and brought up together. He was against teaching a child individually at home, and expressed the benefits of teaching a child with a team at school as follows:

1. If children study together, they will not get bored, they will develop an interest in learning the subject, they will try not to be left behind, and the desire to compete will develop. All of these will help improve your reading.

2. In mutual conversation, children tell each other what they read in books and what they heard from adults.

3. When children gather together, they start to respect each other, make friends, help each other in mastering educational materials, and learn good habits from each other.

In his works, Ibn Sina emphasizes that the following principles should be followed when teaching a student: not to be busy with textbooks at once, to go from light to heavy; focus on team teaching; wrote down his opinion about considering children's inclination, interest, ability, etc. in education.

Burkhaniddin az-Zarnuji wrote in his treatise "Teaching and Teaching the Learner" that as the main conditions for learning science and profession, the student must have a serious desire and mood, then a good teacher and enough time are needed. It is recognized by the Japanese scientist T. Sakamoto that "teaching technology is a field of knowledge related to the system of guidelines that ensures the acceptability of teaching."

The Russian scientist N.F. Talyzina explains that technology "consists of determining reasonable ways to achieve a specified educational goal" and recognition of pedagogical technology as a science.

It was also approved by K.K Selevko: "Pedagogical technology exists as a science that provides some reasonable ways of teaching, as methods, principles and regulations used in education, and as a real teaching process." According to the scientist, the concept of "pedagogical technology" is used at a hierarchical level in educational practice.

DISCUSSION AND RESULTS

In the educational process, under the direct guidance of the teacher, with the help of educational content, methods, tools and forms, the student learns the laws of the organic world, the essence and characteristics of events and events, and acquires knowledge, skills and competencies. . The following ways of organizing students' cognitive activities are indicated in order to increase the effectiveness of education in the teaching of biology:

1. In the process of acquiring knowledge, students' cognitive activity is organized in the following stages:

- preliminary familiarization with the educational material;
- studying educational materials;
- comparison of acquired knowledge with previously acquired knowledge;
- systematization and strengthening of knowledge;
- apply acquired knowledge in new situations.

2. Organization of students' cognitive activities on the basis of independent work:

- creating problematic situations;



- determining the purpose of educational tasks;
- finding answers to questions through independent research;
- check the correctness of answers based on theoretical knowledge and practical skills;
- systematization and strengthening of knowledge;
- applying knowledge, skills and competence in new situations.

3. Organization of students' cognitive activities in order to develop skills:

- determining the purpose and progress of educational activities;
- creating a model of educational activity;
- show an example of performance;
- performance of work by students;
- Learning to repeat an activity and perform it without error.

4. Organization of students' cognitive activities in order to form moral qualities:

- according to the instruction or recommendation of the teacher, find recommended literature;
- familiarization with additional educational literature;
- analysis and evaluation of learned information;
- to determine and assess the contribution of the author of literature to the spiritual and educational sphere of society or to the development of science;
- general conclusion of the students regarding the development of their behavior and moral qualities.

The following should be taken into account when improving the effectiveness of the teaching process of biology:

- Choosing tools, methods and forms in accordance with its content to achieve the goal of the teaching process. Their compatibility with the motivation, needs and interests of students.

- Designing the teaching process, choosing the teaching content and means of achieving the goal, delivering the teaching material using various methods and achieving conscious mastering.

- Carrying out educational operations of students, effectively organizing the educational work of teachers and students.

- Organization of feedback during the teaching process, control and making appropriate changes to the process of mastering the learning material and self-monitoring.

- Analysis and self-analysis, evaluation of teaching results.

- Organizing the lesson in harmony with other forms of education (out of class, extracurricular activities, excursions).

In addition, the activity of the teacher, who is the organizer and manager of the teaching process, plays an important role in increasing efficiency.

The activity of the teacher is to organize and manage their educational activities according to the educational content in order to harmoniously develop the mental, moral, spiritual and physical abilities of the young generation.

CONCLUSION

In conclusion, it should be said that the role of the teacher and the student, that is, the learner, is the same in increasing the effectiveness of education in the teaching of biological science. Traditional education, which maintains its dominance in the current educational process, implies comprehensive teaching of students and organization of cognitive activity of students as passive listeners. In the organization of teaching activities, a middle-level student is

assumed, the independence of students is ignored, educational activities are managed by the teacher.

References:

1. Achilov M. New pedagogical technologies. - Opposite: Nasaf, 2000.
2. Sayidakhmedov N. New pedagogical technologies. - Tashkent: Finance, 2003.
3. Tolipova J.O., Gafurov A.T.. Technologies of biology education. - T.: Teacher, 2002.
4. Tolipova J.O., Gafurov A.T. Biology teaching methodology. Textbook for students of higher educational institutions of pedagogy. - T., Finance and economy, 2007.
5. Tolipova J.O., Gafurov A.T. Biology teaching methodology. Instructional manual. - T.: "Knowledge" 2004.
6. Azimov and others. Biology. Methodical guide. - T., Medical Publishing House named after Abu Ali ibn Sina. 2002.

