

BIOLOGY TEACHING METHODOLOGY

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Annotation: this article will consider the use of Information Communication Technologies in the methodology of teaching biology, their implementation in the classroom and work together with information technology for a more interesting organization of the lesson process. Supplements such as conducting productive quizzes are shown in classes through new online platforms.

Keywords:biology, information technology, teaching, quiz, online platforms, internet, methods. Animation, didactic, method,quiz, didactic materials, interactive, didactic exercises.

Trainer exercises used in biology lessons, inter-class

it allows you to obtain modern biological knowledge, while showing a connection, time savings, a high level of ICT utility. Of great importance is the use of interactive methods to increase the effectiveness of education and the development of cognitive potential of students. The effectiveness of the teaching process in most cases is due to the fact that the teacher

depends on his knowledge, the skills of the correct Organization of the lesson and one or another form of the lesson, skillfully selected when passing the lesson. The use of multimedia tools, virtual laboratories, educational films, didactic trainers in the traditional "class-lesson" system – provides a very large opportunity for the teacher in increasing the effectiveness of the lesson.

It is known that a person receives most of the information through the organs of vision and hearing. Multimedia technologies help these important sensory organs work at the same time. By presenting a dynamic visual sequence (slide, animation, video) in a sound way, it makes the student's attention more involved, making it easier to accept the learning material being studied, helps to understand and remember, to form a vivid imagination, increases the student's activity in acquiring knowledge and provides a clear competence, the formation of knowledge, skills and abilities about the G.K. Selevko believes that in the process of training, modern information technology can be used in 3 options:

1) when teaching separate topics from computer and multimedia technologies as "inbound" technology, as well as didactic materials;

2) as the main pedagogical technology

In the process of explaining a new topic, the teacher will be able to copy the necessary materials into the students' notebooks, as long as the multimedia presentation on the big screen is displayed in sequence. As a result, the teacher's time is saved and has time to convey the subject to the student in a deeper way. To do this, one computer and a video projector connected to it are enough for the teacher.

3) management of the educational process as a monotechnology, formation of monitoring of students in each section of disciplines, keeping an electronic diary of students, reducing current grades to an electronic journal, determining quarterly grades based on reality, determining the level of students' knowledge at the end of the quarter. If the student is unable to master the topic covered for some reason or has left the lesson due to his illness, he can master the lesson after the lesson with the help of processing the lesson left by entering the computer room.

At the moment, even remotely from the computer at home via the internet

there is an opportunity to master the lesson left. A talented student has mastered the topic faster than others (such a student is present in every class). It takes a creative side to master the next topic without waiting for other readers. In this way, the individual approach of each student leads to positive results.

Determining the level of knowledge of the student in the subject, Department and the entire course on the basis of thematic exercises and assignments in the form of picture tests through interactive whiteboards will increase the effectiveness of the educational process and the creative activity of students. In this case, the mistakes made by the students are determined by the computer and work is carried out on the rish, which filled the gaps. In interactive didactic exercises, which are given to each student individually, the correct answers are automatically checked by the computer after the reader has determined the correct descriptive answers among the options. In such a method, the level of knowledge of the student is quickly determined in a truthful way. This program, along with his interest in science, develops his interest in programming.

The use of multimedia technologies in biology lessons is more effective than a drawing drawn on a board with ordinary chalk, interactive educational games, the use of simulators in Botany lessons, for example, as below, as well as exercises.

Rather than eliminating the error on the poster or board in the lesson, the reader himself will eliminate the error through the computer.

To attract the attention of students in the course of the lesson, to use the textbook correctly and purposefully, to master the concepts and definitions given on each passing new topic

it is necessary to widely use pedagogical technologies. Based on methods

the lesson covered gives a better effect than traditional lessons. In the minds of readers

will be preserved, and will encourage their competent thinking. Today

public policy in relation to young people is also broad-minded, society, mainly the younger generation

to participate in interactive training, specific requirements are imposed on the training of students, which develop the skills of mastering the necessary knowledge for active participation in training, readiness for communication, work in interaction, independent thinking, free statement and defense of one's own opinion. For this reason, nowadays it is also possible to take lessons in biology lessons using interactive techniques extensively, attracting students to the full learning process is increasingly

it is improving. The use of innovative technologies in biology lessons further increases the effectiveness of the lesson and the interest of students. Currently, from the modern educational system, modern education in biological science is the organization of classes in an unconventional way, an important sign of which is the achievement of a clear, resultant goal. Non-traditional educational technology differs from traditional educational technology in that it allows students to develop their cognitive capabilities, develop, develop, develop, learn, develop and develop skills and creativity.

In the current educational system, there is a need to apply a new conceptualizing technology for the acquisition of knowledge-the methods of non-traditional educational technologies. Non-traditional educational technology: is divided into collaborative learning, modeling, research (project) technologies, and it is carried out in a holistic integral system. The main concept of pedagogical technology, without words, is the approach to learning as a system. The method of non-traditional education is the basis of the activities of cooperation with the educator and the educational person in the implementation of the educational goal. Methods: ensures the achievement of the expected results that the educational person should know, swallow and appreciate. In this case, all the things and phenomena involved in education and education are in the zero-functional connection and constitute birbutunlik, that is, the pedagogical process. As we analyze and study ways to improve the effectiveness of education in teaching biology. Our biological specialists explained the effective ways of teaching the educational process as follows: Ibn Sina attached great importance to the issue of teaching and raising a child at school and devoted a special section of the work "Eventulmanozil" to anashumasala. In the section "teaching and raising a child at school" of the book, it is mentioned about the involvement of a child in school. The following ways of organizing the cognitive activity of students in increasing the effectiveness of education in teaching biology are shown: preliminary acquaintance with the educational material; study of educational materials; comparison of assimilated knowledge with previously assimilated knowledge; systematization and consolidation of knowledge; application of assimilated knowledge in new cases. In increasing the effectiveness of the process of teaching biology, the following should be taken into account: -the choice of means, methods and forms, in accordance with its content, in order to achieve the goal of the teaching process. The combination of their students in motivation, need, interest. - Design of the teaching process, the choice of the content of training and means of achieving the goal, the delivery of educational material using various methods and the achievement of conscious assimilation. The implementation of educational operations of students, the effective organization of studies of teachers and educators. - Organization of feedback in the process of training, control and training material to make appropriate changes to the process of training and apply self-control. An important role in increasing efficiency is played by the activities of the teacher, who is the organizer, manager of the teaching process. The activities of the teacher are the organization and management of their educational and cognitive activities in accordance with the content of education in order to harmoniously develop the mental, moral, mental, physical abilities of the younger generation. It consists of: selection of educational material, systematization, design in a logical sequence;

Teaching tools, techniques and forms that allow students to receive, understand and consciously assimilate educational material;

Organization of educational and cognitive activities in accordance with the educational goals of each of the students in a holistic manner of the pedagogical process, achieving their acquisition of a system of knowledge and methods of mastering knowledge;

Planning the activities of oneself and students in the course of training;

Determination of methods of organization and stimulation of conscious and active activities of students aimed at mastering the methods of mastering knowledge and skills;

Determination of ways to improve the quality of execution of educational assignments by students;

Making appropriate changes to the organization and management of this process in accordance with the result of the training process;

The task of the teacher to manage the educational process provides for the formation of moral qualities, spiritual elevation in the personality of educators, who are subjects of this process, and not limited to making only appropriate changes to the teaching process. To manage such activities, it is necessary that the teacher first projects the types of activities, the external and internal factors that influence it, the goals in perspective, and the objectives, hypothesizes the results. In conclusion, it should be noted that the role of a teacher and a student in improving the effectiveness of education in teaching biology is one-sided. Traditional education, which currently maintains its dominance in the educational and educational process, is the gross teaching of the learner and the cognitive activity of my learner presupposes the organization as a passive listener. Teaching work in the Organization refers to a middle-level student, the independence of students, education activities are managed by the teacher.

Nowadays, the computer and the internet occupy an important place in human life. Each industry has its place and remains one of the factors of development of the industry. Before combining biology with information technology, what is information technology? The word "information" is derived from the Latin word *informatio*, which means explanation, statement of something or information about something or event. The world in which a person lives is made up of various material and name simple objects, as well as interactions and interactions between them, that is, processes. The evidence of the outside world, which is recorded using sensory organs, various instruments, etc., is called data. Information becomes information when it is found necessary and useful in solving a specific task. So, information can be viewed as signs or recorded observations that are not used for one reason or another or are being processed, stored, transmitted in technical means. If there is an opportunity to use this information to bring the abstract about something to a lesser extent, then the information becomes informational. This means that only those data that are found useful in practice, that is, those that increase the user's knowledge, can be called information. For example, if you write down phone numbers on a piece of paper in a certain order and show them to someone, he will perceive it as information that does not provide any information. However, when the name of a particular enterprise or organization, the type of its activity is written in front of each phone number, the previous information becomes informational. As a result of solving a specific task, new information appears - knowledge, that is, systematized truthful or tested messages. They are generalized as laws, theories as well as other majors of imagination and looklaming. Later, this knowledge is included in the composition of the information necessary to solve another task or clarify the previous one. A person in his life constantly sees work with information from his birthday (so to speak, even from the day when he first appeared in the mother's womb). It receives them through its senses. Information processing technologies have covered all spheres of our life today. The main resource of Informatics is information. From time immemorial, information is understood as information about environmental objects and phenomena, their dimensions, characteristics and circumstances. In a broad sense, information is a nationwide concept that expresses the exchange of information between people, the exchange of signals between people and artificial devices. As you know, as society develops, the existing information about various issues of Economics, Science, Technology, Technology, Culture, Art, Medicine, the organization of the use of information reserves have an increasingly significant impact on intellectual and economic life. So it turns out that informational processes are a multifaceted process. There are also aspects related to the methodology of teaching biology in Information Communication Technologies. Since biology is among the Natural Sciences, great advances can also be made in this science through the use of technologies. However, at present, the use of mobile phones for students is prohibited in our schools. This has a negative impact on the development of digital education (digital learning). In order to provide a digital environment in an educational institution and to improve the quality of the lesson, we will get acquainted with information about the technologies and online platormas that we can use in the classroom. Let's first consider with technical parts. We know that exhibitions and presentations occupy a special place in teaching this subject. Making a presentation in PowerPoint is a bit boring, and since it is used a lot, we will talk about a new platform. This is the Prezi platform. You can use this platform online and present it on the same platform when your presentation is finished. You can draw the attention of students in the course of the lesson using quality wakamyob animations. Even for teaching biology, e-learning comes to us in e-learning. E-learning it means learning something through online platforms, open courses and any other online sites. There are also platforms where lectures and education are given by professors from famous universities around the world to gain foreign experience, both for teaching biology. They are part of the MOOC (Massive online open courses) public online open courses system. Let's give the most qualitative ones for example. EdX is a changing partnership between the Massachusetts Institute of Technology (MIT) and Harvard University in the field of online education to offer online university courses with a certificate to millions of people around the world. Today, several other world-class universities offer online courses at edX. Udemy-this platform has many courses such as web development, business courses, design, IT and software, marketing, lifestyle, photography, health and fitness, music, teaching and academic. In addition, one great thing about Udemy compared to other electronic learning platforms, the prices for their courses are quite acceptable. Another good thing about Udemy is that they provide a certificate of completion for all available courses. Microcopy-this is even if it says that the online platform was created precisely for biologists. Teaching to work with microscopes is an online learning platform. You can sign up for an online course to learn on this platform. One of the useful aspects of this platform is that recorded courses is included in the IRA of recorded online courses. Therefore, you can use it in these wherever you want the time you want. There is a lot of news in the course, instructions for using the online microscope are also given. For an interesting organization of the lesson in the classroom, you can use good information

technology. To repeat the lesson mentioned, draw up a test on online platforms and ensure that students participate in the curriculum. Below are the online platforms for organizing the most interesting quiz. Quizzes-this site is a special platform for teachers, with the topic covered or the questions you want, you can hold a competition between your students. The teacher draws up the tests himself, and togi presents the options to the site and shares them with the students, taking the course of the competition. In what quantity, the answers answered correctly, how many errors, who are finding the most correct answer and the speed of sending it answers, which makes a score taking into account my. Readers will be curious when they develop a test on this platform and participate in the competition and will remember what they read. Kahoot – this platform is also a site for organizing competitions in the form of a quiz. There is also a mobile version of this platform. You can download it through Google Play. There are separate sections for the teacher, student and independent learners. In conclusion, qualitative methods are needed to improve the educational system, to increase the interest of students in biology and other sciences. And when importing these into their classroom, information and communication technologies can be helpful. Many teaching methods and technologies are used in educational institutions around the world. There are also many separate platforms for these. Using them efficiently, it is possible to create a new environment.

The methodology of teaching biology is a private didactics that explores the features of the process of teaching biology in the lyceum. The methodology is not methodical recommendations for lyceum practice, but a science, the theory of which develops on the basis of the tasks set by society for lyceum, taking into account the goals and objectives of the lyceum subject of biology. At the stage of modernization of lyceum education, the tasks of methodological science become more complicated and change. She focuses her attention on adjusting the goals of teaching biology, which should be aimed at educating by means of the subject an active, proactive, creative personality. A student receiving a pedagogical education must: -understand the role of educational institutions in society, the main problems of the disciplines that determine the specific area of its activity; -know the main legislative documents relating to the public education system, the rights and obligations of the subjects of the educational process (teachers, leaders, students and their parents); -understand the conceptual foundations of the subject, its place in the general system of knowledge and values, as well as in the basic curriculum; -take into account in pedagogical activity the individual differences of students, including age, social, psychological and cultural; -understand the general principles of designing the pedagogical process in teaching biology, based on the use of norms and rules that formulate the essence of the concept of "method of teaching biology" -have sufficient knowledge of the subject for analytical evaluation, selection and implementation of an educational program that meets the level of preparedness of students, their needs, as well as the requirements of society; -to know the scientific and theoretical foundations of the biology course in terms of the depth of factual material and the volume necessary and sufficient for training in accordance with the requirements of the State Educational Standard for Biological Education; -to know the methodological and general theoretical patterns of selection, structuring and variable construction of the content of the biology course in the lyceum, its distinctive features in the conditions of profile education for the period 2005 -2010.; -understand the main methodological approaches to the study of the biology course at lyceum; -know the technique of staging and the methodology for conducting a biological experiment in the volume of a biology course at lyceum; -own the methodology for solving computational, logical and other types of problems within the framework of the requirements provided for by the basic biology course in the lyceum;

-organize the learning activities of students, manage it and evaluate its results; -apply the main methods of objective diagnostics of students' knowledge in the subject, make adjustments to the learning process, taking into account this diagnostics; -use a computer and computer programs for the preparation of teaching materials; -create and maintain a favorable learning environment conducive to the achievement of learning goals; -develop students' interest in the subject and motivation for learning, form and maintain feedback. Upon completion of the course for this program, the student in his activity should be able to: -apply the acquired professional skills and abilities for the successful implementation of the process of teaching biology at the lyceum; -to determine the content of biological education, the structure of the biology course in the lyceum, taking into account the type of general education; -carry out the selection of methods and means of teaching and control, as well as forms of organization of educational and cognitive activity of students in accordance with the logic of the expediency of their use in specific conditions, which allows achieving the planned learning outcomes for biology course in the lyceum; -technologically competently analyze their own professional and methodological actions, correct and improve them on the basis of achieving the ultimate goal of teaching a biology course in a senior (profile) the lyceum. The discipline "Theory and Methods of Teaching Biology" ends with writing a term paper and an oral exam, which checks the assimilation of the general theoretical, scientific, methodological and practical parts of the course material, as well as the ability to illustrate the main theoretical provisions with examples arising from the process of teaching the subject of biology.

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