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PEDAGOGICAL INFLUENCE FACTORS OF INDEPENDENT MASTERING OF BIOLOGY LESSONS BY STUDENTS

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Annotation: In this article, the pedagogical influence factors of students' independent learning of Biology lessons, the stages of the student's own independent experience, the skills and qualifications of the student according to each subject program, as well as the sources of independent learning, Pedagogical possibilities of deep understanding and systematization, logical thinking, application of independently acquired knowledge based on moral values, formation of effective independent work skills are highlighted.

Key words:independent learning, observation, logical thinking, Pinus sulvestris, dome, botany, system, pine.

Today, independent mastering in the educational process the choice of biological educational material for students is finally considered one of the complex issues in the methodology of teaching biology. It is decided by the cooperation of school teachers, educators, biological scientists. The difficulty of choosing educational content for students is inextricably linked with the abundance and rapid growth of scientific information. In the following period, it became known that biology consisted of an increasingly rapidly developing system of independent Sciences. It is made up of a complex of private disciplines including Biology, Zoology, Physiology, Anatomy, morphology, genetics, stitology, anthropology, Embryology, paleontology, microbiology, Hydrobiology, biogeography, biotechnology, bioethics, bioestetics, evolution doctrine and more. Such a rapid development of biology is explained on the one hand by the study of organisms in different ways, on the other hand by the study of different levels of life, and on the third hand by the integration of biology with other fields of Medicine - in particular mathematics, cybernetics, chemistry, physics. The stratification of Biological Science and cooperation with other natural sciences are the reason for the accumulation of New-new information. Knowledge about the structure of the ultrastructure of cellular organelles, its function, symbiogenesis theory about the origin of the cell, the structure and function of nucleic acids, material foundations of heredity and variability, polytypic species, populations, ecological genetic structure, cariosystematics, various levels of life structure are considered achievements of Biology in the 20th century. The volume of knowledge, information accumulated in biology is incredibly large and diverse.

Independent education played an important role in increasing the student's knowledge and experience in education. In this regard, the following tasks stand: to increase the imagination and strength of students mastering knowledge; skills and competencies in the student in accordance with each subject program, as well as resources for mastering independent knowledge, their deep understanding and inclusion in the system; to be able to apply the knowledge, skills and qualifications acquired through solving the problem in life, including; establishing the development of cognitive abilities, observation, logical thinking, creative activity of students; the formation of a culture of mental and physical labor; the application of

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independently acquired knowledge based on moral values, the formation of skills for effective independent work. These are also considered one of the main tasks of today's Science Education.

Individualization and specialization of the educational process depends on the emergence of interest in learning in students. In turn, interest in acquiring knowledge is also directly related to the formation of educational motivation in students. Based on educational motives, students are divided into four groups. In the first group, only external negative motives predominate; internal instructional– cognitive motives are not observed. In the second Group, External motives are the main, and internal educational–cognitive motives are the second. In the third group, internal motives prevail, but educational–cognitive activity will be weakly developed. In the fourth group, internal motives predominate, cognitive activity becomes actively developed. Ways to introduce the personality-oriented technology of training into the educational process were developed by American psychologists B.Blum and Dj.Caroll researched. They consider the technology of complete assimilation of knowledge, M.V.Clarín based this technology on the theoretical side. The use of information resources in the organization of independent work of students in biology classes requires the organization of its methodological system. In particular, in the teaching of biology, it is necessary that the teacher, in order to develop students ' independent work skills, first of all, draw up educational tasks for students to work independently in the lesson, prepare instructions for conducting experiments and observations with the aim of studying biological objects, seasonal changes in nature [1,2,3].

For independent education, those in the country are considered important:

- Set a real goal. When creating self-learning habits, it is important to set work goals that are appropriate for yourself, for your life and for other obligations. You can set only a certain number of chapters to read each night, adjust your workload based on how heavy your schedule will be for any week, and succeed by giving yourself a mental break every week to calm your mind.

- Learn in a way that suits you. There are many ways to learn, and it is important to adapt learning methods to find what works for your brain. Some students find reading aloud useful, while others like to take handwritten notes rather than writing. Find what works best for you and stick to it.

- Take a look at the day you learned the material. After taking a note in an online course or reading the next chapter of your textbook, review all new material by typing your notes, practicing your new skills, or rereading the chapter. While it may seem boring, it only takes a short time. The review will help to absorb the material for a long time, so it will reduce the need for compression in the future.

- Learn in short, frequent workouts. Instead of treating your training session like a marathon, divide your material into a series of short sessions separated by short breaks on the topic. This way, you won't be looking at your books or computer for too long when you're in the spotlight, and your brain can perceive the material more easily. While difficulty may seem like a great way to cover most materials in a short time, learning in short, frequent sessions is an effective way to learn the subject and learn independently.

- Try yourself regularly. Testing yourself will help you understand what you have learned and in which areas you still need to work. You can use an online resource like Quizlet to turn your notes into flashcards and create essay questions. This will help you better prepare for the quizzes and tests you need to take as part of the course.

- Explore additional resources. You can find various additional resources that will strengthen your understanding of the topic you are studying. Look for videos, podcasts, books,

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and articles to help you delve deeper into the topic. If the course you are studying recommends resources for further study, check them out too.

- Be stable. Self-study requires discipline, so it can be helpful to stick to the schedule. Add a note to your phone and you will be asked to read at the specified time. Soon after, he becomes a habit.

- Create a personalized learning space. In remote learning, it is important to create a learning space for yourself.

- Be in order: keep teaching materials organized. Create a system for notes, assignments, and resources. This makes it easier to review and find information when necessary.

- Reflect and customize: evaluate your learning styles regularly and change them as needed. If something doesn't work out, be open to trying new approaches.

- Think about your progress and make changes to optimize your learning experience [5].

- It can be seen that the education of Biology in high school should have a polytechnic character, and it should be associated with the participation of the younger generation in socially useful and productive work. This communication is carried out on farms, in landscaping, in search of new minerals, plants, in the collection of medicinal plants and other socially useful activities. This helps to deepen theoretical knowledge and allows schoolchildren related to nature, agriculture, to choose a profession.

- The study of Biology provides ample opportunities for the upbringing of love and respect for Labor, recognition of labor as the source of all material and spiritual wealth of mankind. When it is correctly established to study the biology course at school, he does not instill knowledge even after graduating from school by independently obtaining information

- Raises and develops the need to renew.

- It is impossible to imagine the life of a modern person without scientific knowledge of living nature, since his life is completely connected with the flora and fauna. But plants are a source of organic raw materials and energy on Earth. The animal world in turn serves as a source of various food and industrial raw materials. The skillful use and reproduction of Natural Resources serves to elevate the well-being of the people and the state. Today, the performance of practical classes in Botany, one of the branches of Biological Science, acquires a high level of skill. During the training, the student will have to focus on:

The content, specifics of practical work organized in botanical lessons, knowledge of the ways in which students organize and manage cognitive activities;

The skills and competencies that are found in students in these practical classes, their understanding of the working methods that have taken place from their composition;

Methodology for conducting practical training on the topic" Open seeds", skills for organizing, activating and managing the cognitive activity of students.

Purpose from work:

The systematics, general structure, living conditions and the life cycle of the structure of male and female domes (Pinus sulvestris) in their specific development of the section of crustaceans consist of acquaintance on the basis of natural temporary, herbarium and plant specimens.

Necessary equipment and weapons: microscope, magnifying glass, buym glass, covering mirror, tweezers, sharp-pointed scallop or lezvia, spruce, kiparis and living domed branches of ordinary Pine, herbariums. Fixed samples of young pollinators and seeders of species in alcohol. Various permanent micropreparations.

Technology used in practical training:

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The method of working in small groups of collaborative teaching technology.

The course of practical training:

1. Organizational part.
2. The purpose of practical training of students, their course, independent acquaintance with the educational tasks to be completed.
3. Acquaintance with the methodology for conducting practical training on the topic" Open seeds".
4. Completion of practical training.

In the teaching of Botany, there are certain skills within the requirements for the knowledge and skills of students, which, in order for them to be mastered by students, it is certainly necessary to organize practical training at the required level.

For this reason, practical training plays an important role in the teaching of Botany. So that the teacher can organize practical classes:

Determination of practical training taking place from the curriculum;

Determine the skills and competencies that should be acquired by students in practical classes;

Determination of working methods that are part of these skills and competencies;

Preparation of equipment and training assignments necessary for practical work performed by students;

When conducting practical training, it should determine the ways of organizing, activating and managing the cognitive activity of students.

The teacher must prepare the above experience with the help of students 3-4 weeks before conducting practical training and instruct students to take care and observe them.

in students, gaining cognitive interest from the point of view of science, stimulation, active acquisition of knowledge, finding answers to interesting questions and gaining experience indicate a complete mastery of the content of the program. The more effective the mental and practical learning process, the more effective its result.

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