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Didactic Conditions For Developing Independent Educational Activity Of Biology Students In An Innovative Educational Environment

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Abstract

This article provides information on independent work in modern educational conditions, effective organization of independent learning of students in secondary schools, the main components and content of independent work. It also covers the basic principles, stages and levels of organization of independent work.

Keywords: secondary schools, students, independent learning, independent work, independent activity, innovative education, educational materials, interactive education, practical exercises.

INTRODUCTION

In the global trends of the development of the education system in our country, a trend is developing towards an increase in the share of independent work of students and a shift in emphasis on learning with the participation of the teacher. In this regard, the need to transition to a competency-based approach in the educational process, the formation of a system of skills and qualifications for independent work, and the upbringing of a culture of independent activity of students is evident.

Independent work in the modern educational process is considered a form of organizing educational activities, which serves to independently search for the necessary information, creative perception and understanding of educational materials during classroom lessons, the development of students' ability to analyze various cognitive activities in the classroom and out of class, the development of management skills, planning study time, and the development of skills and abilities for rational organization of educational work.

Thus, independent work is a form of organizing the educational process that stimulates students' activity, independence and interest in knowledge.

Independent learning is a variety of individual and group activities of students in the classroom and outside it, carried out at home without the direct participation of the teacher. Introducing students to the world of biology education problems, as a rule, is aimed at achieving different goals. Nevertheless, the main goal is to become a creative person who is able to independently reflect, engage in dialogue, and search for new, non-standard methods in the process of solving life tasks.

It is difficult to single out the most effective of the existing educational models, systems, and technologies, while the use of independent learning creates a real opportunity to encourage students to be creative and develop themselves.

Independent work of students is divided into in-class and out-of-class. During the lessons, various types of control, creative and practical tasks lead to independent work of the class. Independent work outside the classroom traditionally includes the completion of written homework, preparation for the analysis of previously heard subject materials in practical classes, preparation of data, performance of work, etc. The entire period of

studying the subject and does not have strict regulatory norms.

Today, five levels of independent work can be distinguished.

The first level is verbatim and corrective repetition of information.

The second level is independent work on a sample.

The third level is reconstructive independent work.

The fourth level is heuristic independent work.

The fifth level is creative (research) independent work.

The main components of independent work are its content, the object of training (students' learning activities) and the teacher's training activities. Innovative educational technologies expand the analysis of the educational process, that is, in the purposeful preparation of the components of the theoretical framework, it is acceptable to use the following general principles:

The first principle is the division of interrelated materials into mini-blocks (modules). It requires a careful analysis of the author's educational material program, clarification of the storage of parts and fragments of text.

The second principle is aimed at activating students during reading as separate blocks on the content of the text, developing analytical skills.

The third principle is that each student's answer should be predicted, that is, if the student's answer is correct, it is necessary to allow them to proceed to the next stage.

The fourth principle is that there are many types of independent work in secondary schools: preparation for a new topic; preparation for practical classes, laboratory work, exams, as well as the implementation of educational projects.

The fifth principle is that it is necessary to determine the level of difficulty of independent educational tasks for each student, based on his or her own capabilities.

The emergence of new educational technologies opens up wide opportunities in this regard. For example, V.I. Andreev emphasizes in his work that in recent years the concept of quality education in the 21st century has emerged. Effective use of information and communication technologies is necessary for the education and upbringing of students, which covers an ever-expanding field of education and requires more and more time for educational activities.

Modern education involves the widespread use of interactive learning. Interactive methods, their capabilities and practical application in the higher education system are considered, in particular, in the studies of T.I. Anisimova, L.A. Krasnova, Yu.V. Gushchin, E.A. Reutova. These works emphasize that the use of interactive methods helps to organize the educational process more effectively, in which the student becomes a full-fledged, active participant

Independent work is divided into the following groups:

1. Work performed after the lesson, working with textbooks, study guides when completing homework, preparing a synopsis.

2. Solving typical tasks. In this case, the student restores previous knowledge in memory and partially changes it and applies it to specific tasks. For example: solving a problem, an exercise;

3. Applying the learned knowledge in atypical conditions. The student uses the knowledge he has learned in new conditions. There may be some commonality in the conditions.

4. Creating a basis for creative activity. In this case, the student understands the essence of the field being studied, identifies its new relationships, connections, and connects ideas and concepts to new conditions.

Independent learning is about helping students become independent learners, developing the confidence, competence, and interpersonal skills to master academic content, the ability to apply knowledge and new skills, and the self-motivation to enable them to succeed in post-secondary education, the world of work, and life. While students are the ones doing the learning, creating the conditions for students to learn requires a strong focus on systems and processes to ensure that their brains are able to respond to the demands. These include instruction and learning demands that are academically, intellectually, and personally challenging.

Independent work in the educational process in secondary schools solves the following tasks:

- to consolidate and expand the knowledge and skills acquired by students during classroom and extracurricular activities, their transformation into stereotypes of mental and physical activity;
- to acquire additional knowledge and skills;
- to form and develop knowledge and skills related to research activities;
- to develop a direction and attitude to the qualitative development of the educational program;
- to develop self-organization skills;
- to form independence of thought, the ability to self-development, self-improvement and self-awareness;
- to develop skills for independent theoretical, practical and educational and research activities.

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