



Use of Modular Teaching Technology in Biology Education

Usmanova.M.S¹, N. M. Abdibannonjva

¹ Ph.D, P.f.f.d, Kokand DPI, Faculty of Natural Sciences, Senior Lecturer, Department of Biology

² Kokand DPI, 2 course master

Abstract: This article discusses the development of the abilities, consciousness and skills of students, the deepening of their scientific and practical knowledge, the effective organization of educational activities of students today, the increase in creative abilities, and interest in the profession and a conscious increase in responsibility.

Keywords: competitive method, junior consultant method, individual, module, skill, qualification, independent mastery, creative mastery.

The research conducted on the teaching of biological sciences shows that the modular teaching technology gives good results in the formation of professional knowledge and skills of students. The use of modular teaching technologies in teaching biology is of great importance. A unique feature of the modular education technology is that the topic studied in the lesson is divided into logically complete thought modules and a module program is created. The module program is a program for managing the student's educational activities in this lesson; it includes the didactic purpose of the module program, the educational tasks that the students should complete, and instructions for completing the tasks. In order to use the technology of modular teaching in the educational process, the teacher should do the following: Modular planning of educational materials (determining which subjects will be studied using the technology of modular teaching at the beginning of the academic year); designing modular lessons on these topics, creating module programs in accordance with the educational, educational and developmental goals of the topic.

According to the content and essence of the module programs: module programs designed for students to work individually, each student's talent, interest, level of knowledge, determination and acquisition of mastery level, independent and creative work on the textbook, individual development of self-assessment skills; module programs intended for two students to work together, except for those mentioned above. Students to teach each other, to perform educational tasks and solve problems in cooperation, to carry out mutual control; module programs intended for students to work in small groups together with the above provide for communication, discussion and discussion, mutual cooperation and support between students.

The teacher uses individual module programs before these module programs. After making sure that the students have developed the skills of independent and creative mastering of educational materials, after the creation of appropriate pedagogical conditions for the module programs intended for two students to work together. Should use module programs intended for working in small groups.

There are two approaches to using structured module programs for small groups:

1. Competition method.

The teacher divides the students into small groups of equal number. Organizes independent work with the help of the module program. At the end of each module, a question-and-answer session is

held in the form of a competition. Winners will be determined between the groups. Group members evaluate their work taking into account the opinion of their colleagues.

2. Method of small consultants.

The teacher divides students into equal number of small groups and organizes independent work using the module program. Small consultants are assigned to each group. Junior consultants manage the group work, supervises students' activities. Organizes assistance in appropriate cases. Q&A at the end of each module. training will be held. Students are evaluated through mutual control.

The difference between modular teaching technology and traditional teaching:

Education based on traditional teaching technology	Education based on modular teaching technology
One-sided information	Learning through reflection and hands-on activities
one-way communication	two-way communication
textbook - teacher - student	remembering information through analysis
get information store in memory	demonstration of knowledge and skills
mastering the content without understanding it	understanding the content and connecting it to life

The module system of education has the following advantages: provision of continuity of education by subjects and modules; establishment of compatibility based on inter-module methodological aspect: adaptability of the composition of the modular structure of the subject; classification of students according to their abilities (after the initial modules, the teacher may recommend individualization of the subject to some students): acceleration of teaching in order to "compress" information, effective use of classroom hours and study time content, lecture, practical (experimental) training. optimization of hours allocated for individual and independent work. As a result, the student will have the necessary support and competences related to the subject.

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