INTERDISCIPLINARY MODULAR EDUCATIONAL TECHNOLOGY OF THE DEVELOPMENT OF AESTHETIC COMPETENCE IN THE TEACHING OF BOTANY IN FUTURE BIOLOGY TEACHERS

Ismailov Khurshid Esirgapovich *- pffdok (PhD),*
Academic Lyceum of Tashkent State Agrarian University

Abstract: This article provides information about the effective use of the modular education system and its importance and structure.

Keywords: module, competence, modularity, dynamism, flexibility.

Modular teaching appeared in the 60s of the 20th century and spread rapidly in English-speaking countries. In the theory of modular learning, the concept of a module means an independent part that performs a specific functional task (carries the load) of some system. By module, we mean a didactic unit of educational material that covers the important aspects of the subjects logically and perfectly, keeping in mind the specific goal of a certain educational subject. Modular learning is a logically defined part of learning information that has some logical integrity and completeness, coordinated with the control of knowledge. An educational module is a meaningful part of a training course together with related methodical materials.

Study module - instructions for the time of completion of each study assignment, control and accounting methods, study materials (paragraph, topic, section, subject, integrated course). In a more simple and unique way, the study module reflects the subject(s) of the usual study programs together with more rational forms and methods of its study.

The essence of modular teaching in botanical teaching of biology teachers is that the learner (student) works independently based on the individual curriculum presented to him. This educational program should contain a plan of actions, a block of information, and methodical recommendations for achieving learning outcomes. In this situation, the teacher supervises, gives advice, and performs the tasks of coordination of information acquisition activities. Peculiarities of modular education.

The modular system of teaching was officially discussed for the first time in 1972 at the World Conference of UNESCO in Tokyo. Modular teaching technology comes from the general theory of functional systems, neurophysiology of thinking, pedagogy and psychology.

According to research in these areas, the human brain, whose tissue is modular, best perceives information in quantum form (in other words, in the form of definite contributions). Modular training creates opportunities to comprehensively solve the following modern issues of professional education: optimization and systematization of training content based on module - activity, ensuring variability and flexibility of programs; individualization of teaching; control the effectiveness of training at the level of teaching practical activities and evaluating observable actions; on the basis of professional motivation (interest), activation of the teaching process, independence and full realization of teaching opportunities.

Two different approaches can be distinguished in the modern theory and practice of modular teaching in botanical teaching of biology teachers: the activity approach in science and the systematic activity approach. Within these approaches, a number of concepts of module-based specialist training have been developed. At the core of all concepts is the activity approach, and from this point of view, the training process is directed to the student's sequential mastering of the elements of professional activity in accordance with the content of the modular educational program, either as a whole or within a specific discipline.

Within the framework of different concepts, modular educational programs consist of different content and structural structures, are presented in different forms of documents, but all of them necessarily include the following three main components: targeted content program; information bank presented in different views; methodological instructions for students.

Biology teachers' principles of modular teaching in botany teaching.

1) modularity - separation of separate elements from the teaching content;

2) dynamism - achieving mobility (practicality) and speed of knowledge;

3) flexibility - adapting the content of education and the ways to achieve it according to the individual needs of the learner;

4) comprehensiveness of methodical advice - ensuring professionalism in the learner's cognitive activity and pedagogical activity;

5) equality - ensuring working cooperation between the learner and the pedagogue;

6) the principle of relying on errors. This principle will be directed to the development of didactic materials and tools aimed at creating situations for constantly searching for errors during the teaching process, forming a structure of early detection within the functional system of the mental activity of students.

7) the principle of saving study time. This principle is aimed at creating a reserve of study time for students to work individually and independently;

8) the principle of integrity. This principle implies a systematic approach to the development of curriculum and programs to ensure the achievement of learning objectives. In this, according to the goals of the subjects, the hours in the curriculum are matched.

9) the principle of activity: this principle means that the modules are formed according to the content of the specialist's activity;

10) principle of systematic quantization. This principle is based on the requirements of the theory of information compression, the concept of pedagogical knowledge, and the theory of expanding didactic units.

11) the principle of motivation (arousal of interest). The essence of this principle is to encourage the student's educational activity. This is the basic rule.

12.) principle of modularity. This principle serves as the basis of individualization of teaching.

13) the principle of problematicity. This principle makes it possible to increase the effectiveness of learning material due to practical orientation of problem situations and exercises.

14) principle of cognitive visuality (observable by eye). This principle is derived from psychological and pedagogical laws, according to which exhibitions in teaching increase the efficiency of mastering only if they perform not only a picture task, but also a cognitive task.

Biology teachers' technology of organizing modular education in botany teaching.

In the modular teaching technology based on the activity approach to science, the module embodies the following:

fundamental concepts of an academic discipline - a particular phenomenon, or law or department, or a larger topic, or group of interrelated concepts

aimed at learning (mastering) one or more fundamental concepts of the academic subject.

Usually, the module consists of 3-6 hours of lecture sessions and related practical (seminar) and laboratory sessions.

Based on a strict systematic (multifaceted) analysis of the explanatory apparatus of science, the most effective module is created. This makes it possible to separate a group of fundamental phrases, logically and compactly group the material. Since the module is an independent structural unit, in some cases, it allows individual students

to listen to only a number of modules, not the whole subject. This creates an opportunity to optimally plan the individual and independent work of talented students.

In modular training, through full, reduced and in-depth classification of training programs, there will be an opportunity to differentiate training, that is, it will be possible to individualize training.

List of references:

1. JO Tolipova "Pedagogical technologies in biology teaching" Tashkent 2011

2. AT Gafurov and others. General methodology of teaching biology. Instructional manual. T., 2005. 152 p.

3. Tolipova JO, Gafurov AT Biology teaching methodology. Instructional manual. T. "Knowledge" 2004. 160 p.

4.www/hazir.org.202