

# PRINCIPLES USED IN TEACHING ECONOMETRICS BASED ON MODULAR EDUCATIONAL TECHNOLOGY

RAVSHANOVA MUHAYYO MAXMANAZAROVNA

Assistant, Karshi Engineering Economics Institute, Tel: +99890 733-55-59

## ABSTRACT:

The article argues that the interrelationship between individual-based technologies and the principles of modular teaching allows for a new approach to the learning process and the opening of new opportunities for more effective application of didactic principles in the pedagogical process.

**KEYWORDS:** technology, module, education, didactics, principles, program, method.

## Introduction

The didactic system of modular education in econometrics, like any other didactic system, involves the development of learning content in accordance with the objectives, with common didactic principles and criteria. The content of the topic is structured in the form of a program based on generally accepted principles:

- focus on the main concepts and methods of the topic;
- systematic and logical sequence of presentation of educational materials;
- integrity and practical significance of the content;
- View of the presentation of educational materials.

A modular program for a topic should be developed based on the above principles, taking into account the specific features of modular education in the course of econometrics. These specific principles include: modules; composition; flexibility; efficiency; speed; feedback.

## PURPOSE:

The principle of modularity - the essence of which is the main idea of modular training - the use of modules as a primary means of assimilating the amount of educational information about the proposed professional activity in the learning process. The principle of modularity is the individualization of education, as it provides variability and ways of mastering them, depending on the level of basic training of students, as well as the characteristics of their professional specialization.

The principle of creating educational content includes the division of educational material into components within the module, each of which has a clearly defined didactic purpose, and the content of the lesson is presented in a volume that ensures its achievement. The modular program implements a comprehensive didactic goal, which includes integrated didactic goals, the achievement of each of which provides a unique module. The content of the module is structured on the basis of learning elements that correspond to specific didactic objectives.

## SCIENTIFIC NOVELTY OF THE ARTICLE

The principle of flexibility implies the ability to respond quickly and adapt to changing scientific, technical and socio-economic conditions as a key feature of modular learning technology. Flexibility affects the structural, content and technological aspects of the learning process. The learning process, which is regulated by the module curriculum, can be modified by the number, composition, and development sequence (structural flexibility) of

the modules as the set of teacher behavior or descriptive models changes and takes into account the individual characteristics of the learners. Content flexibility is primarily reflected in the differentiation of educational content, the variability of technological-educational methods and the mobility of control and evaluation. Aspects considered as a procedural principle of modular training include the variability of methods and tools, the flexibility of the assessment management system and the individualization of the learner's learning activities.

The principle of speed implies, first of all, the need to establish a system of rapid communication in the learning process in order to monitor, correct and evaluate the success of the module in a timely manner.

The principle of equality, one of the factors determining the success of module learning is the level of subjective-subjective relationship between teacher and student. Unlike the usual "teacher-transmitter" - "student-receiver" scheme, the educator assigns the role of a passive participant in the learning process, modular learning technology involves the interaction of the educator and the student studying the module materials, acting as a coordinating coordinator.

The feedback principle ensures that the learning process is managed by creating a system of mastering and controlling the module learning material. The modules, arranged with a system of self-management and self-organization, provide the transfer of information-control functions of the teacher to the student's personal-coordinating management functions.

## **RESULTS AND PRACTICAL APPLICATIONS:**

The process of creating a modular program begins with defining its structure. P. A. Based on the work of Yutsyavichene [3], we give a general scheme for determining the structure

of the modular program:

- Defining the name of the complex didactic purpose and modular program;
- identify the integrated objectives and the names of the modules associated with them;
- building a modular program structure;
- Defining the content of specific goals as part of each integrated didactic goal;
- Create a specific module structure based on the specific purpose structure.

The content of each module is formed in accordance with the defined structure of the modular program, which must contain the following components:

- Transformative-didactic goals into a program of targeted actions for students;
- teaching material composed of learning elements, as well as methodological support of the learning process;
- information on methods of control and self-control, as well as possible ways of mastering this training material.

Based on the analysis of research on the problem of designing modular learning technologies, the self-employment approach allowed to identify developments in the underlying personal-learning educational technologies.

The main descriptive features of this technology are proposed on the basis of the research of RS Bekirova [1]:

- Education built solely or primarily on the basis of data transmission should be replaced or significantly supplemented by current and future-oriented educational activities. The main focus is on organizing the different types of activities that are taught.
- The content of education is changing: activities will be data-driven. At the same time, the socio-cultural context is also reflected as the content of education.
  - Forms of interaction between educators and students, as well as students, are also changing. Traditional

forms are being replaced by active forms of learning: didactic games, analysis of competitive situations, role-playing, discussion types, trainings, and more.

- Changing the purpose, content and form of teaching has a significant impact on the nature of the relationship between teacher and student, the environment of interaction. Cooperation, equality, responsibility in choice, a positive emotional environment - all this becomes a priority in a relationship.

The peculiarity of individual-activity pedagogical technologies is included in the principles of their design. These include the principles of activity, individualization, partnership, reflexivity, freedom of personal choice and responsibility for it.

The principle of activity is the active perception of the studied phenomena, their understanding, creative processing and application. The student becomes the subject of the process due to the involvement of different types of activities, problem solving, joint team search in solving scientific and practical problems. The principle of activism helps to form strong effective knowledge, skills. This includes the clearly defined goals and content of the training, the structure and form of its presentation, the student's ability to work independently, self-manage and repeat the material as needed. These opportunities are modular training, the implementation of which is problematic and provided with the principles of flexibility.

The principle of individualization of educational activities is aimed at creating the most favorable conditions for the implementation of the learning objectives of each student. Therefore, this module is closely related to the principle of flexibility of reading. In addition, the principle of individualization includes requirements such as simplicity, consistency, integrity of training, which can be achieved through the formation of the structure

of educational discipline. In this regard, the principle of individualization may be related to the principle of structuring modular reading.

The conditions of a creative approach to the organization of the relationship between teacher and student - the principles of reflexivity, partnership, freedom of personal choice and responsibility for it can be combined into one group. This group of principles is closely related to the principle of implementing the feedback link of modular learning. Moreover, the principle of individual freedom of choice is related to the principle of flexibility, which only offers different options of modular applications.

From the above, it is clear that all the principles of self-directed pedagogical technologies are closely related to the principles of modular learning.

The generalization of materials on the problem of innovative pedagogical technologies allows to draw the following conclusions:

- The basis for designing modular learning technology is a quality education standard, i.e. learning modules should be developed in terms of different professional contexts.
- Currently, the most promising are individual-activity pedagogical technologies, which identify a number of didactic principles that are interrelated with the specific principles of modular education theory.
- The interdependence of individual-activity pedagogical technologies and the principles of modular teaching, as well as the technological efficiency of teaching provides optimal conditions for the creation of an integrated pedagogical technology of modular teaching.
- Modular teaching technology is based on a model of person-centered learning, based on the stratification and individualization of the didactic process.

### **CONCLUSIONS AND SUGGESTIONS:**

Based on the above considerations, we can conclude that the design of modular applications and modules is as follows:

- Designing the didactic objectives of the modules. Currently, the basis for such design are the existing state educational standards and curricula for the specialty, the availability of which is an important condition in the design of pedagogical technologies.
- The share of time devoted to independent work of students in the curriculum has been increased. The description of traditional science courses in higher education has the character of providing information. Modular learning allows students to increase the volume of learning through various forms of independent work.
- Existing state educational standards and curricula for the specialty do not impose strict requirements on the composition of individual departments of science and the sequence of their presentation. This makes it possible to distinguish individual sections of disciplines in terms of the content of the study material and the time of its study. Modular learning is done by optimizing the level of stratification of module content.

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