



Essence and Application of Modular Learning Technology

Abdumomnonov M.

Professor Samarkand state architectural and civil engineering institute

Abstract: *This article analyzes one of the most pressing issues in the education system of the country, the analysis of the achievements of modular learning technologies in recent years, the requirements for the practical application of modular learning technologies and the rules, the purpose and essence of modular learning technology, and the work to be done to develop the modules.*

Key words: *Module, block diagram, individualization, logical chain, advice, didactic purpose, learning element*

Date of Submission: 05-10-2021

Date Of Acceptance: 13-11-2021

Introduction

The idea of modular learning technology began in the United States in the 1960s, and was first discussed internationally at the 1972 UNESCO World Conference in Tokyo and in the 1982 Paris Declaration. the module is defined as follows: A module is a separate training package designed to provide one or more skills in individual or group training through exercises, careful acquaintance at specific speeds, and sequential learning.

The system and principle of modulation is mainly derived from the block diagram method used to solve exercises in computer science, which means Latin modulus-part, block or whole unit. Application and development of modern educational technologies in bringing the level of knowledge and skills of students and future professionals studying in educational institutions of the Republic to the level of international standards in terms of quality and qualification "National Program of Personnel Training" Section 3: "In order to establish and develop a two-tier system of higher education, it is necessary to: accelerate the teaching of students using new pedagogical and information technologies, a modular system of training ..." This shows that modular learning technology is a topical issue in the education system.

Materials

There are two approaches to the practical application of modular learning technology: the science approach and the system approach. Within these approaches, various concepts of modular learning technology have been developed, which underlie the activity approach, and in this context, the teaching process as a whole or within a particular subject, the elements of professional activity in accordance with the content of the modular curriculum. will be focused on serial mastery by the bird.

The main objectives of the transition to modular learning technology are:

- Ensuring continuity of education (integration between disciplines);
- individualization of the student;

- create conditions for increasing the effectiveness of independent learning by creating a bank of materials necessary for the learning process;
- Accelerate learning;
- Improving the quality of theoretical knowledge, as well as professional skills.

As for the essence of the organization of the educational process on the basis of modular teaching technology, it is the teacher's advice to learn in working with each module of the subject or independently of the specific objectives of the activity, in whole or in part of using.

Of course, to ensure the efficient operation of any activity or system, it is necessary to create a chain of interconnected logic in a certain sequence and develop the requirements for the mechanism of its operation.

The main requirements of modular learning technology are:

- All learning elements are included in the content of each module setting goals for acquisition;
- ensure that the module achieves one or more didactic objectives focus;
- The content of the modules is independent thinking, logical thinking and practical be activity-oriented;
- study of the module in order to develop professional and creative thinking

This is to ensure that the content of the material is presented in a problematic manner.

Methods

In modular training, it is necessary that the knowledge, skills and abilities of students are strictly evaluated in the rating system of control.

The training materials prepared for each module include a modular program that fully covers the study period, theoretical materials (lectures), teaching materials, individual assignments, teaching and research a list of references, assignments for independent work, and control assignments.

In order to develop and implement modular educational technology, it is advisable to do the following:

- Development of a modular curriculum of science based on state educational standards;
- Development of curricula for each subject on the basis of standard modular technology;
- Development of a working syllabus of the subject on the basis of a modular curriculum;
- create a system of guidelines and instructions for the training element listed in the syllabus, a database, accounting and graphic work, assignments for independent and individual work;
- Monitor the level of mastery of learning elements

Develop procedures for interim and current inspections to increase:

- Test for final control of each module

create test questions by modules.

The effectiveness of the transition of each subject to a system of modular teaching technology can be assessed depending on the following factors:

- The level of modern material and technical equipment of the department;
- Qualification level of the teaching staff of the subject;
- The level of creation of electronic databases of teaching materials, tools and information in accordance with the requirements of modular technology in science;
- level of comprehensibility and mastery of didactic materials;
- Improving the learning elements in the modules based on the analysis of the results achieved;
- Provide students with a handout and a set of illustrations for each element of the lesson before class.

Results

In the process of creating modules in science, students gain certain practical skills in exchange for the theoretical part of the learning elements (lectures) and the logical connection of practical lessons and laboratory work related to them. In addition.

In the preparation of each element of the module, it is necessary to organize it on the basis of systematization in small blocks, to present the training materials in block diagrams and visualized form, to present problem-based and instructive reports that provide generalized information on key issues of science. In technology and in the form of technological maps increase the effectiveness of mastering the topic.

Discussion

Depending on the nature and essence of the science, the modules can be structured as follows:

historical - a brief description of the history of the problem, theorem, problem, concept;

problematic - problem formulation;

structural - systematic representation of the module content;

activation - highlighting the basic phrases and methods of action needed to master the new learning material;

Theoretical - the main educational material, in which - didactic goals, problem statement, substantiation of hypotheses, ways to solve the problem;

experimental - description of experimental material (study experience, work, etc.);

generalization - generalization of the image of the problem solution and the content of the module;

application - the development of new methods of action and a system of issues for the practical application of the studied material;

errors - to reveal the types of errors observed by the student in mastering the content of the module, to identify their causes and show ways to correct them;

connection - to show that the passed module is connected with other modules, including related disciplines;

- Deepening - providing complex learning materials for gifted students;
- Test - a test to monitor and evaluate the level of mastery of the content of the module by students.

Conclusion

Thus, the development and application of modular teaching technology in science:

- Accelerate the educational process through the integration of disciplines;

- increase the level of interdependence within the module and with other modules in the study of topics;
- a systematic approach to defining and building a component of science;
- effective control of students' knowledge on the basis of modules;
- Carry out additional classes, consultative activities in order to determine the level of mastery of the subject in a short period of time;
- Provides students with a creative approach to science.

References:

1. European Commission ECTS Guide of 2004. Available at https://www.uc.pt/ge3s/pasta_docs/ects-users-guide170804.pdf
2. European Commission ECTS Guide of 2009. Available at https://ec.europa.eu/education/ects/users-guide/docs/year-2009/ects-users-guide2009_en.pdf
3. European Commission ECTS Guide of 2015. Available at https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf
4. Robert Wagenaar, A History of ECTS, 1989-2019. Developing a World Standard for Credit Transfer and Accumulation in Higher Education. International Tuning Academy, 2020. Available at https://www.rug.nl/research/portal/files/111591811/A_History_of_ECTS_1989_2019_PDF.pdf
5. Jessica Shedd (2003), "The History of the Student Credit Hour". New Directions for Higher Education. 122 (Summer) (122): 5–12.
6. Resolution of The Council and of the Ministers of Education, Meeting within the Council, Official Journal of the European Communities, 1976.
7. THE INTERSECTION OF THE SURFACE OF THE ENGINEERING BUILDING WITH THE SURFACE OF THE EARTH SuvonovObidjonShukurullayevich. Samarkand State Institute of architecture and construction. World Economics & Finance Bulletin (WEFB). Available Online at: <https://www.scholarexpress.net>. Vol. 1 No. 1, December,2020, ISSN:
8. Suvonov O. SPECIALIZED MOBILE GAMES IN PRACTICAL EXERCISES ON THE NATIONAL FIGHT OF KURASH. World Bulletin of Management and Law (WBML). Available Online at: <https://www.scholarexpress.net>. Volume-3, October-2021. ISSN: 2749-3601
9. SuvonovObidzhon, ErdonovMuhammadiNuralievich, OmonturdievAbdulazizMamayusupovich. The First Traditional Gardening Art in the "Garden" Style Built on the Territory of Uzbekistan. «The First Traditional Gardening Art in the "Garden" Style Built. «Middle European Scientific Bulletin» Volume - 16 (2021) September. DOI:doi.org/10.47494/mesb. 2021.16.728. ISSN (E): 2694-9970. <https://cejss.academicjournal.io/index.php/journal/issue/view/16>.
10. Abdumannonov M. Architectural composition of non-spreading line surfaces. Vol.6 № 3, May 2021 of IEJRD. IEJRD is delighted to award you for publishing your Research Paper. Entitled. 7.169.