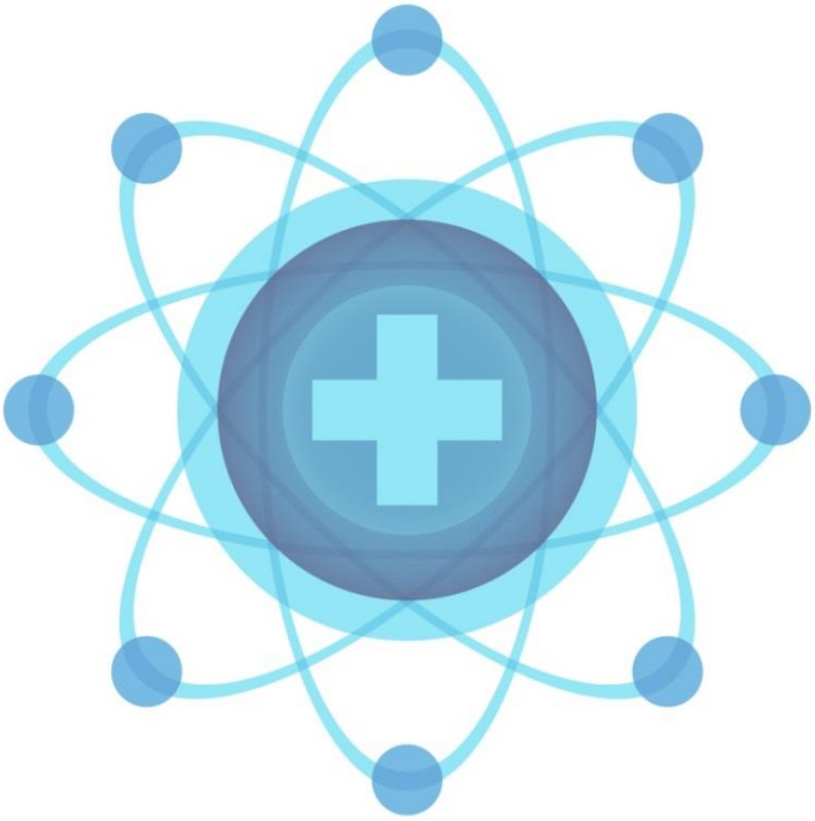

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SPECIFIC ASPECTS OF THE CREDIT MODULE SYSTEM IN MEDICAL HIGHER EDUCATION INSTITUTIONS

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Abstract. Continuity and coherence in the educational system is an impetus to expand the spiritual and intellectual potential of society and ensures the stability of scientific and technical development. The interrelationship between various components of the quality of continuing medical education ensures the purposeful application of various methods and methods to the educational process.

Keywords: medicine, higher education institutions, credit module system, features

In the training of specialists in the field of medicine, it is very important to acquire the theoretical knowledge and practical skills, as well as the ability to search in the scientific field. The implementation of innovative educational technologies has a unique effect on the training of competitive specialists in the healthcare system, requiring educators to constantly use modern technologies and activate the independent learning process.

Today, teaching methodology, like didactics, is going through a difficult period. Currently, the goals of higher medical education have changed, new curricula are being developed, and new concepts of education are being created based on new approaches to reflect the content not through separate subjects, but through integrated educational directions [1, 3].

It is known that the quality of education is determined by the extent to which the learner can apply his knowledge in practice. As time has shown, unfortunately, forms of passive-informative teaching of students cannot eliminate the differences between the mastery of the theoretical material of academic subjects and the level of their creative clinical thinking and the correct formation of research skills.

Today, we cannot rely only on explanatory-illustrative and reproductive methods, which are widely used in teaching practice. Renewal of education requires the use of non-traditional methods and forms of its organization, including integrative methods, which are important in the credit module system. Integration should be considered not only in terms of interdependence in subjects, but also as an integration of educational technologies, methods and forms.

The need to transition to integrated education arises for a number of objective reasons: a significant decrease in students' interest in subjects; inadequate design and development of existing programs; inconsistency, dispersion of the stages of knowledge formation among students, the development of generalized skills and competencies in them. Practice shows that, in some cases, a concept or term within individual disciplines is defined differently, which in turn complicates the educational process [4, 6].

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In the study of this process, the experience and specific positive aspects of the universities of the following foreign countries, which took high places in the QS and THE ratings, were observed.

1. Harvard University (USA)
2. University of Freiburg (Germany)
3. Koryo University (South Korea)
4. "Aladdin Keykubat" University (Turkey)
5. Vilnius and Kaussans universities (Lithuania)
6. Kazan State Medical University (Russia)
7. Asfandiyorov National Medical University (Kazakhstan)

In all studied foreign higher education institutions, the field of study is called "Medicine".

In the foreign higher education system, the bachelor's study period is 6 years, but at Harvard University, after 4 years of medicine, a targeted 4-year educational process is organized in the chosen field. European and Asian countries are divided into pre-medical and medical sciences, 2 years of pre-medical fundamental sciences and 4 years of medical sciences are taught [1, 6].

The process of medical education in foreign higher education institutions has the following features:

- social sciences are not taken into account;
- different approaches were observed in the field of languages (in some cases, the teaching of the state language was taken into account, and in others, a foreign language was taught);
- the state's level of development, orientation to current and future trending sectors;
- that subjects are formed in the form of a module, taking into account the integration between them;
- development of clinical thinking and analytical skills;
- orientation to scientific inquiry;
- special attention is paid to the process of independent education, the presence of the reconnection process;
- special attention is paid to practice;
- formation of students' skills to conduct independent scientific research [5, 6].

Scientific research is one of the important approaches in the field of medicine at Harvard University. During the development week at the beginning of the learning process, learners are provided with information on assessment, feedback, self-monitoring, learning consolidation, individual generation of learning plans. In the elementary courses, basic sciences are taught in mutual integration - biochemistry, cell biology, genetics, developmental biology and introduction to anatomy, histology, pharmacology, pathology, immunology, microbiology. Despite the fact that the first stages of education are relatively complicated, it is formed as a separate module for the sciences of protection and immunity in diseases relevant in medicine: dermatology, rheumatology, allergy / immunology. Health policy, medical and professional ethics, social medicine, clinical epidemiology/public health, etc., provide

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a foundation for future specialists to learn specific principles and apply important skills in providing medical care to the population in practice.

Scientific research takes the main place in the educational process. At the same time, advanced and integrated courses are important. The process of clinical and scientific experimentation is highly implemented. Pre-professional education provides students with the fundamentals of medicine, the scope of care, and the fundamentals of clinical science. Basics of communication, physical examination, clinical reasoning, and presentation skills are taught to ensure the continuity of the fundamental clinic, and a relatively large number of 14 credits are allocated. The homeostasis module is of particular importance, covering specific aspects of cardiovascular and respiratory systems, haematology, gastroenterology, kidney, endocrinology and reproductive endocrinology. At the next stage, the integration of the sciences of human consciousness, brain and behavior, as well as neurology and psychopathology is carried out [8, 9].

During the transition to the main clinical experience, 5 credits are allocated to the areas of clinical anatomy, visualization, clinical epidemiology and medical ethics, culture, drug addiction, and human development. During the basic clinical experience, the main areas of medicine, neurology, obstetrics and gynecology, pediatrics, first aid, psychiatry, radiology, surgery are taught in depth and an average of 10 credits are given. 10-12 credits are allocated during the educational process in order to teach them to work independently in the Principal Clinical Experience, and conditions are created for them to participate in the research process directly in the laboratory. In 3 stages, perfected clinical and scientific experience, integrated scientific courses (AISC), advanced clinical and scientific experience, scientific project, clinical electives, intermediate internships, other advanced electives are carried out and it is possible to collect 60-65 credits. At this stage, a general OSCE is required.

At the next stage, the clinical experience acquired on the basis of scientific approach in the process of "Clinical Peak" along with integrated courses, mandatory courses is described and an average of 50-52 credits are allocated. In stages 5 and 6, a targeted practice process is established and conducted in clinics under the leadership of moderators [10, 12].

The medical education process in South Korea is based on the experience of Asian and European countries. In particular, education at Koryo University is divided into premedical and medical stages. At the premedical stage (1-2 courses), basic medical biological sciences are taught - molecular biology, cell biology, medical genetics, general chemistry and laboratory work, medical statistics (theory and practice), physics , chemistry, mathematics and a foreign language are taught.

The positive aspects of the educational process are as follows: at this stage, special attention is paid to the integration of science and technology, thinking and expression, a wide coverage of the concepts of quantitative thinking, and the possibility of practical application. At the same time, separate credits are allocated for the introduction to medical education and the theory of medical education.

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Fundamental medical integrated practice allows to increase the level of preparation for practice based on the acquired knowledge and skills of the students.

3 to 8 credits are allocated to the subjects that provide the fundamental basis in 3 stages and are taught separately - biochemistry, anatomy, physiology, histology, fundamental neurology, microbiology, pathology, embryology, pharmacology. At the same time, special attention is paid to the direction of preventive medicine (clinical epidemiology) [8, 11].

And at the next level, clinical sciences namely nephrology, psychiatry, cardiology, behavioral science, clinical medicine, immunology, obstetrics and gynecology, pediatrics, infection, pulmonology, health management, musculoskeletal, neurology, clinical anatomy, gastroenterology, emergency medicine, endocrinology and on average, 1-4 credits are allocated to metabolism, hematology, oncology. One of the distinctive features of this stage is the special credit given to clinical medicine and its research and diagnostic process.

5 and 6 are internships, which include clinical medicine synthesis and clinical assessment, along with internal medicine and surgical studies (up to 2-4 credits). Of particular note is practical medicine, medical ethics and professionalism, and preventive medicine (environmental and industrial). At the last stage, the evaluation of the synthesis of medical theory, the evaluation of clinical medicine skills, the process of evaluation of the synthesis of fundamental medicine, volunteering and the graduation exam are held. In the stage of medical sciences (3-6), clinical sciences are mainly taught. Clinical practice is carried out in the 5th and 6th courses with a share of more than 60% of the practical process.

Based on the experience of European countries, a clear view of the credit module system has been introduced in the medical education process in Turkey. In the 1st and 2nd courses, the educational process is carried out in fundamental subjects. Introduction to basic medical sciences: medical biology [7, 9].

Medical biochemistry, biophysics, medical history and ethics, medical terminology, physiology, histology, embryology, anatomy, medical psychology, public health (up to 9 - 10 credits) as well as Turkish language, English (1 - 2 credits) are compulsory subjects. entered as Biostatistics and information technologies are allocated -2 credits. In order to strengthen the sense of patriotism, national Turkish dances were also included in the competition subject and 2 credits were allocated. Starting from the 3rd course, a system of joint teaching of logically and clinically interrelated subjects has been introduced. In 6 courses, a full practice process has been introduced. Integrated case discussion is also one of the unique aspects of the learning process.

A number of reforms have been implemented to improve the medical education process in the state of Lithuania. During the 1st and 2nd semesters, mandatory courses in medical and biological sciences are taught at Vilnius University: anatomy, biology and human genetics, histology, introduction to the medical examination process, Latin and special language, biochemistry, human psychology, basics of professional communication, 5 credits each. In the 3rd and 4th semesters, general education modules are also taken into account, and the basics of general

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microbiology, immunology, human physiology, health system, propaedeutics of internal medicine, and clinical oncology are taught. Nursing skills are also emphasized. During the 5th and 10th semesters, clinical subjects are taught and allocated an average of 5 credits. Clinical practical skills are formed as a separate discipline. In the 10th semester, family medicine is also taken into account. In the 11th and 12th semesters, an internship and a thesis are required [11, 12].

In Kaunas Medical University, in the 1st and 2nd semesters, health, examination methods, general skills of doctors, first aid and basic fundamental sciences are taught as part of the medical entrance course. Social studies is taught as an elective course. 5 semesters with special emphasis on professional competencies and clinical skills. Organization of scientific research is taken into account. In semesters 7 and 8, practical skills in clinical medicine are taught separately in clinical subjects. Procedures and effective communication skills are also important. Separate modules have been created since the 9th semester. Separate credits are allocated for research work and practice.

At the University of Freisburg, the 1st and 4th semesters are the pre-clinical stage, the scientific foundations of medicine, i.e. fundamental sciences, are taught, and a 3-month internship is required. 5 and 6 semesters of intensive practical courses, i.e. medical-biological, pathological, hygienic, preventive, psychological, health sciences are taught. Clinical subjects are taught separately in the 7th and 10th semesters. In the 11th and 12th semesters, an internship is organized in a clinic. At the end of the 2nd year, the final state certification is given for the transition to the clinical stage and at the end of the 10th semester, the transition to the internship [3, 7].

In the Russian Federation, the medical education process is divided into humanitarian, fundamental, medical-biological, specialty courses, and in the 1st-3rd stages, mainly social, medical-biological sciences are taught as pairs. At these stages, fundamental sciences are conducted in the form of practical training and lecture training. In the section of 4-6 courses, an average of 10-12 subjects in the fields of therapy, surgery, pediatrics, obstetrics and gynecology are formed in the form of cycles in the section of semesters. Particular attention is paid to the sciences of comorbid conditions. A separate practice process is organized at all stages. At the end of 6 courses, the final state certification is held.

Conclusion. It should be said that although the process of medical education in foreign countries has its own principles, the process of teaching basic and clinical sciences has an almost common approach to the organization of the educational process. In all countries, to one degree or another, an integrative approach is taken into account. In the United States of America, medical education is mainly based on scientific research, and in European countries, scientific-practical experience is established on the basis of a modular approach, vertical integration is taken into account, and in Korea and the Russian Federation, the educational process is distinguished by the superiority of horizontal integration between disciplines.

Continuity of theoretical knowledge, acquisition of practical skills and practical processes in higher medical educational institutions in foreign countries is provided

by implementation in the auditorium - simulation training centers and in the clinic. The process of practice and scientific research is conducted under strong supervision and evaluation is fully taken into account.

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