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APPLICATION OF THE CREDIT-MODULAR SYSTEM IN MEDICAL EDUCATION

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Abstract: Credit technology gives students the right to choose optional subjects included in the working curriculum, thereby directly participating in the formation of an individual curriculum. They are given the freedom to choose not only subjects, but also professors. Giving students the opportunity to choose subjects is a positive thing. It is also considered a specific value indicator for evaluating educational processes.

Keywords: credit-modular system, medical education, features, problems.

Credit technology gives students the right to choose elective subjects included in the working curriculum, thereby directly participating in the formation of an individual curriculum. They are given the freedom to choose not only subjects, but also professors and teachers. Giving students the opportunity to choose subjects is a positive thing. It is also considered to be a unique value indicator of the evaluation of educational processes.

The credit-module system has been introduced in the educational system of many advanced and developed countries of the world and has its own characteristics in different countries [1, 3].

The National Education Committee of the United States introduced the concept of "credit" not only for colleges, but also for high schools in order to improve the "college-school" link, standardize the curriculum in high schools, and later undergraduate programs expanded the credit system of content evaluation to the stages of master's and doctoral education. Obtaining a bachelor's degree (Bachelor of Arts - BA or Bachelor of Science - BSc) involves 4 years of study. During this period, the student will need to master 40 subjects with an average of 3 credits each. The first and second years are devoted to the acquisition of basic knowledge (provided, 60-68 credits) and it ends with an intermediate degree (Associates), the third and fourth years are devoted to intensive study of specialized subjects, and this process is accompanied by a qualifying examination. is completed [2, 7].

The second stage of higher education (Graduate Level) is a master's program designed to obtain a master's degree (Master of Arts - MA or Master of Science - MSc) as a result of an average of two years of study. The second stage and the third stage of the training of highly qualified specialists is the study of doctoral programs, which is focused on studying a narrow specialty and independent scientific research.

A student must earn a certain number of credit hours to earn a degree. In the US Credit System (USCS), a credit hour is a measure based on study time. For example, 1 credit hour at the undergraduate level is equivalent to 1 academic hour of classroom work per week for the student during the semester. In addition, 2 hours (100 minutes) of independent work is added to each lecture.

In master's degree, and especially in doctoral studies, it is assumed that the contribution of independent work will increase in this volume of work. In the USA, it is required to collect at least 120 credit hours in 4 years for a bachelor's degree, 30-60 credit hours in 1-2 years for a master's degree, and 60-90 credit hours in 3-4 years for doctoral programs [4, 6].

The USCS system increases the mobility of American students, as credits earned at one university are counted at others, allowing them to transfer their studies from one institution of higher learning to another while keeping credit. This practice is also used to link the processes of remedial and remedial studies.

University education in Spain is multi-level and includes the following periods:

- the first period of study: it lasts at least 3 years and is equal to 180-270 Spanish credits;
- combined first and second periods: 4-5 years (6 years for medical specialties), the first period 2-3 years, the second 2 years. In the indicated 4, 5 and 6 years, students accumulate 300-500 credits.
 - the second period individually;
- third period doctoral studies. At the end of the first term, students can be awarded academic degrees such as Diplomado, Arquitecto Tecnico and Ingeniero Tecnico. At the end of the second period, the degrees of Licenciado, Arquitecto or Ingeniero Superior are awarded.

The doctoral degree is awarded to students who have completed their studies in the third term and successfully defended their dissertation. In Spain, the definition of "credit" is different - each credit corresponds to 10 hours of classroom training, and the student's learning is evaluated based on the sum of accumulated credits. Separate credits are collected by students for theoretical and practical training, and they can be obtained even by completing other educational tasks in addition to classroom training [5, 9].

In Sweden, 1 Swedish credit is considered equal to 1 week of study at a university. This system was introduced to facilitate the creation of study plans and the calculation of hours of study completed by students. The academic year in Swedish universities lasts 40 weeks and consists of autumn and spring semesters. Thus, the student accumulates 40 credits during the academic year, including lectures, individual work and other activities. To get a bachelor's degree, you need to take 120 credits over 3 years of study. Master's studies last 1-1.5 years (60 credits), and doctoral studies last 2-4 years. To compare Swedish credits with European ECTS credits, they are multiplied by 1.5. For example, 120 Swedish credits in the bachelor's degree are equal to 180 ECTS credits, and 60 Swedish credits in the master's degree are equal to 90 ECTS credits.

Educational processes in Swedish universities are organized in the form of lectures, seminars, debates (with or without the participation of a teacher). At the end of each course, there are exam seminars, assignments in 22 classrooms, and written exams. In Belgium, the credit education system is adapted to the European ECTS credit system and presented in the form of international cooperation [6, 10].

Dutch academic programs focus on areas of research in which students are awarded degrees. Even in the first academic year, students do not study general subjects. This is because such subjects are included in the last two years of secondary education. At Dutch universities, students study according to individual study plans prepared together with their mentors. The curriculum includes compulsory subjects and optional subjects. The size of each subject is measured by test units, which are indicated in the university catalogs.

The academic year at the university is divided into 5 semesters, in each semester the student actually studies only 2-3 subjects. The reason for this is the use of a modular education system and a very high pace of lessons in each subject (several hours of lessons can be held in one day in one subject). Independent study of educational materials and conducting scientific research on one's own subject are important parts of university programs.

The UK education system is based on the United Kingdom's CATS (Credit Accumulation and Transfer Scheme/System) system, which aims to integrate a large number of qualification systems for each type of qualification. loans are regulation and unification by setting [8, 12].

The CATS system is widely used in the United Kingdom, South Africa and New Zealand. A CATS academic year comprises 1200 conditional study hours or 120 credits, 1 UK credit equals 10 conditional study hours. Conditional study time refers to the number of hours a student spends on mastering a subject. Part-time classroom training, basic practical work, project work, self-study, preparation for and passing exams, i.e. learning activities necessary for all types of mastery, includes z.

To obtain a bachelor's degree at a British university, one must accumulate 360 British credits over 3 years. In the fourth year, students are allowed to obtain the degree of "Bachelor with Honors". Scotland uses the Scottish CAT (SCOT CATS) system, which is based on the CATS system, and unlike other regions of the United Kingdom, undergraduate studies last 4 years instead of 3 years. It is a unique national system of Scotland in the United Kingdom [9, 11].

The Japanese system of test units is based on the American USCS system, with only one difference - the concept of "credit-hour" is replaced by the term "test units" (units). It is worth noting that several US universities, in particular the Massachusetts Institute of Technology, also use this term. In order to get a bachelor's degree, a Japanese student must study at a university for 4 years, 2 years of which are extensive general education, and the next 2 years are 25 specializations. Subjects are divided into mandatory and elective subjects. In Japan, one test unit means that a student must study a subject for one hour per week for a semester and earn 146 test units to obtain a bachelor's degree. Post-graduate education in Japan consists of two stages: "master course" - lasts 2 years and ends with a master's degree, and "doctor course" - lasts 3 years and ends with a doctor's degree.

In order to receive a master's degree, a student must collect 30 test units (in which elective subjects are agreed with the academic supervisor) and write a diploma thesis. In order to receive a doctorate degree, after receiving a master's degree, it is necessary to engage in scientific work under the supervision of a scientific supervisor for 3 years, pass graduation exams and defend a doctoral thesis.

Studying the Chinese education system on the example of Tsinghua University, Peking State University, Beijing Technical University, and Jilian

University shows that the People's Republic of China has adopted a three-level education system similar to the American education system. 120 credits are required to obtain a bachelor's degree, and 30-60 credits to obtain a master's degree. The academic year is divided into two semesters and begins on September 1. However, the duration of the semester is 20 weeks, unlike the American system. Studying at universities is 4-5 years, at medical universities - 7-8 years, and at vocational-technical schools - 2-3 years [1, 10].

Based on the above analysis of world education systems, it is much easier to convert American credits (USCS) to European (ECTS) and Asia-Pacific (UCTS) credits: 1 American credit hour = 1 Chinese credit = 1 Japanese test unit = 2 European credits = 2 Asia Pacific credits = 4 British credits.

The analysis shows that there are significant differences in the educational systems of the countries. If the European credit reflects all contact hours in the classroom and hours outside of it, the American credit hour strictly includes only the contact hours in the classroom and allows the student to do twice as much independent work.

The credit-module system was created based on specific needs. First of all, it is closely related to the introduction of freedom into higher education curricula and the introduction of elective subjects into curricula. In addition, the credit-module system was created based on the need to form higher education curricula not "from the top down", but from the "bottom up", that is, based on the time, the labor market and the needs of students [2, 5].

In addition, the credit-module system was formed on the basis of the need to improve the relations of the country's higher education institutions with universities outside the country, to achieve recognition of the country's universities in the international arena. The main tasks of the ECTS credit-module system today are to bring freedom, flexibility, transparency and student-oriented education to higher educational institutions.

The study and analysis of the credit education system shows that it has its own characteristics in different countries of the world. However, the effectiveness and appropriateness of the credit education system is based on its widespread use in the education systems of many countries of the world, because the focus of educational programs on the development of independent work skills in students encourages creative activity and self-mobilization for learning., allows to increase the quality of education [3, 7].

Conclusion. In the module-based teaching system, the rating evaluation system is used to evaluate students' knowledge, qualifications and skills. In it, all the student's educational activities, that is, the knowledge acquired and mastered in the auditorium and outside the auditorium, are evaluated by giving points. A credit is the minimum amount of time allocated to a student to study independently and in the classroom, usually for one week. Credit is given to the student after completing the assigned tasks in a certain subject and successfully passing the final exam.

Each student must accumulate credits in order to obtain a diploma in the field and specialty of his choice in the future. The accumulated credit will serve the student to improve his qualifications or receive additional higher education throughout his life. In economic terms, accumulated credit becomes a student's academic "asset".

References

- 1. Oʻrinov V., Umarov A. Oliy ta'limda kredit-modul: yangi oʻquv yilida talabalarni nimalar kutmoqda? https://kun.uz/news/2020/07/22/oliy-talimda-kredit-modul-kelayotgan-oquv-yilida-talabalarni-nimalar-kutmoqda. [in Uzbek]
- 2. Jessica Shedd (2003), "The History of the Student Credit Hour". New Directions for Higher Education. 122 (Summer) (122): 5–12.
- 3. Resolution of The Council and of the Ministers of Education, Meeting within the Council, Official Journal of the European Communities, 1976. https://eurlex.europa.eu/legal).
- 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.
- 5. Maxmonov U.A. Oliy ta'limda kredit-modul tizimining joriy etilishi va imkoniyatlari // Zamonaviy ta'lim / 2021 yil, (1). [in Uzbek]
- 6. Abdullaeva U.K. Znachenie interaktivnых metodov obucheniya v sovershenstvovanii urovnya klinicheskix znaniy studentov // Meditsinskoe obrazovanie i professionalnoe razvitie. 2019. №1(33). В. 29-33. [in Russian]
- 7. Timofeev A.A. Kreditno-modulnaya sistema organizatsiya uchenogo protsessa v vыsshem uchebnom zavedenii / A.A. Timofeev // Sovremennaya stomatologiya. 2019 S.142-143. [in Russian]
- 8. Buslyuk G.E., Andreenko R.E., Kolechyonok A.A. Modulnoe obuchenie. Minsk: Krasiko-Print, 2007. 176 s. 3. Kachestvo vыsshego obrazovaniya i sistema zachetnых yedinis // Vыsshee obrazovanie v Rossii. 2004. No 5. S. 14-18. [in Russian]
- 9. Kuznesova Ye.I., Kraves A.G. Modelirovanie kreditno-modulnoy strukturы individualnoy traektorii obucheniya studenta / Izvestiya Volgogradskogo gosudarstvennogo texnicheskogo universiteta. 2009. Т. 6. S. 99-102. [in Russian]
- 10. Metodicheskie rekomendatsii po vnedreniyu v vuze sistemi zachetnых yedinis (kreditov) / Gosudarstvennыy universitet upravleniya, Sentr kachestva : [sost. O.V. Davыdova, V.I. Zvonnikov, M.B. Chelыshkova] М.: GUU, 2010. 50 s. [in Russian]]
- 11. Smolyaninova, Yu.V. K probleme vnedreniya ballno-reytingovoy sistemы v vuze / Yu. V. Smolyaninova // Ekonomika. 2010. vыр. 5. S. 64. [in Russian]
- 12. Xobotova, E. B. Vozmojnosti sovershenstvovaniya kreditno-modulnoy texnologii obucheniya / E. B. Xobotova // Vestnik Xarkovskogo natsionalnogo avtomobilno-dorojnogo universiteta. 2009. No45. S. 7-9. [in Russian]