

INTRODUCTION OF THE CREDIT-MODULE SYSTEM INTO THE EDUCATIONAL PROCESS IN HIGHER EDUCATIONAL INSTITUTIONS

Esanov Muzaffar Khoshimovich

Center for Research on the Development of
Higher Education, Deputy Director, (DSc)

Abstract

This article discusses the introduction of a credit module system in higher education institutions, The issue of developing modern educational programs, raising the training of highly qualified professionals to a new level, and ensuring the harmony of education, science, and practice in the field is highlighted.

Keywords: Credit, curriculum, education, quality of education, content, methodology, effectiveness, mechanism, analysis, experience.

Introduction

Our government is paying special attention to the systematic development of higher education institutions in our country, the development of modern educational programs based on the introduction of advanced foreign experiences, the raising of the training of highly qualified professionals to a new level, and the integration of education, science, and practice in the field. In accordance with the Resolution of the President of the Republic of Uzbekistan No. PF-5847 dated October 8, 2019 “On approval of the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030”, and in accordance with the Order of the Ministry of Higher and Secondary Specialized Education No. 357 dated June 30, 2020, higher educational institutions of the republic switched to the credit-modular system from the 2020-2021 academic year. [1]

Today's reforms include the creation of a new generation of educational and regulatory documents, taking into account the student's labor intensity, developing the academic and professional flexibility of graduates, and introducing intensive methods of mastering knowledge, including the introduction of a credit-module system.

Adapting the educational process to international standards (based on ECTS - European Credit Transfer System).

- Developing students' independent learning skills.
- Accurate planning and control of the training load.
- An objective and transparent assessment of the student's level of mastery.
- Creating opportunities to evaluate the effective performance of teachers.

The following are recognized as the main tasks of the credit module system:
organizing educational processes on a modular basis;

determining the value of a single subject, course (credit);

assessing student knowledge based on rating scores;

allowing students to individually design their own study plans;

increasing the proportion of independent learning in the educational process;

The convenience of educational programs and the ability to change them based on the demand for specialists in the labor market.

Advantages of the credit-module system:

- Flexibility: The student can choose subjects according to their interests and schedule.
- Transparent evaluation: Evaluation criteria are predefined and open.
- Mobility: Credits are recognized with other universities.
- Improving the quality of education: Teachers' performance is evaluated based on effectiveness.
- Academic freedom: The student participates in shaping his or her own curriculum.

Credit was first introduced in American universities in the 18th and 19th centuries, and was created to liberalize the educational process and determine a student's weekly academic workload [3].

In 1869, Charles William Eliot, president of Harvard University and a prominent figure in American education, introduced the concept of the "credit hour." Thus, in the 1870s and 1880s, a system measured in credit hours was introduced. Studying and mastering curricula using the credit system allowed students to independently plan their learning process, control its quality, and improve educational technologies.

The introduction of the credit accumulation scale not only gave students greater freedom, but also the opportunity to independently plan their academic process so that they could become competitive specialists in their chosen field in the future. At the same time, it led to improvements in the assessment system and educational technologies.

As envisaged in the Bologna Declaration, the credit-module system, with its emphasis on independent learning, serves mainly two functions:

The first ensures the mobility of students and teachers, that is, their free and unhindered transition from one higher education institution to another (transfer of studies or work);

Secondly, the academic load - credits - is calculated precisely for all educational and scientific activities in the student's chosen field of study or specialty. The total number of credits reflects how much the student has mastered in the chosen program [4].

Based on the resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to improve the system related to the organization of educational processes in higher educational institutions" dated December 31, 2020, the REGULATION "On the procedure for introducing the credit-module system into the educational process in higher educational institutions" was approved. This Regulation provides the main concepts related to the credit-module system [2]. According to it:

GPA (Grade Point Average) is the average of a student's grades in a program, calculated using the following formula:

$GPA = \frac{K_1U_1 + K_2U_2 + K_3U_3 + \dots + K_nU_n}{K_1 + K_2 + K_3 + \dots + K_n}$: is equal to $K_1 + K_2 + K_3 + \dots + K_n$.

In this:

K – the number of credits allocated to each subject/module;

U is the grade a student earns in each subject/module;

Credit is a unit of measurement of the learning load mastered by a student in a particular subject based on the results of his/her education. Credits can be expressed in whole or fractional numbers, as required;

Credit accumulation – the accumulation of credit units awarded as a result of mastering educational elements and achieving other achievements;

A student's personal learning trajectory is a path (route) chosen by the student that allows him or her to sequentially accumulate knowledge and acquire the desired set of competencies.

Study load - the number of hours required by a student to achieve the expected learning outcomes based on the implementation of all types of educational activities - lectures, practical classes, seminars, laboratory work, course project (work), internships, and independent work.

In the context of credit-module, higher education institutions are facing problems in filling the concept of "module" with content. Analysis shows that there are difficulties in identifying the main disciplines for the formation of modules.

Two different approaches are used to explain the concept of a module:

First, the modules – in content and thematic form;

Secondly, modules are formed according to the principle of organizational and structural requirements.

In the first approach, a module is understood as a block of subjects that form a certain interconnected whole within the framework of an educational program, and is considered as a logical substructure within the overall structure of the program. An educational module is interpreted as an independent unit of the curriculum, representing a set of educational subjects, in a direction [4].

The second approach to the module is understood as a relatively independent organizational and methodological complex within the structure of the educational subject, which includes its didactic goals, a logically completed unity of educational material, a methodological guide for its mastery and a control system. In this case, the module forms the educational and methodological complex of the subject. In our republic, the term "module" is often understood as a complex of educational subjects. According to the experience of advanced higher educational institutions, a module is also understood as a part of the course, for example, a logically completed part of the subject divided into calendar terms.

The mastery of each module, that is, the fulfillment of the tasks set in it, is part of the final grade given as a result of studying the subject, and in this respect the modular principle is similar to a rating. In European universities, the overall score given at the end of each course is usually composed of several components that have a cumulative effect. For example, 30% of the overall grade may depend on the student's academic activity in lectures and seminars, 30% - on the results of an intermediate test (essay on a given topic, independent study, intermediate control in the form of a test, etc.), and the remaining 40% may depend on the exam score. A student who has missed many lessons (classes) and failed the intermediate control can only hope for a satisfactory grade in the exam. Conversely, a student who shows



activity during the implementation of current tasks and receives a high rating can receive a high final grade, even if he gives a completely unsatisfactory answer to the exam.

However, this approach does not take into account the student's mastery of the module in relation to other subjects in the curriculum. Each module is considered independent.

In the credit-module system, each module should be a completed segment of the educational program, and the acquisition of a certain set of competencies by the student is the result of its mastery. These competencies must be checked and assessed in a mandatory manner. Of course, competencies are formed over a very long period of time (at least one semester, and possibly several semesters). For the assessment of relatively completed parts within a semester, the concepts of "section", "subsection", "topic" are more useful than modules. A module can be understood as a separate part of a course of study, a thematic block combining several academic topics mastered in lectures and seminars.

In European universities, the curriculum has a different structure: within one module, disciplines that are thematically close to each other, regardless of their general status, are combined. The main principle of the module structure is the progression from simple to complex, from methodological disciplines to applied disciplines. Therefore, the module may contain both "general" disciplines and "professional" disciplines, etc. Within the framework of the educational module, both fundamental and applied disciplines are combined into a harmonious whole. For example, in Germany, a module is understood as one of the areas of mastering a level of education, a separate part of the educational program, not a course. An important feature of the modular system is its orientation to student practice, including research. The module allows the student to quickly and effectively move from one area to another, from one level to another, combining conceptual knowledge and practical skills. Therefore, the modular organization of the educational process at the master's level requires that it be coordinated with the individual program of the master's student (the topic of his master's thesis).

In European higher education, a series of courses (subjects) are called modules. A module provides a holistic view of a particular subject area and allows you to indicate the level of certain competencies that a student should demonstrate after completing this module. A module is not defined by the subject, but by the achievement of a learning outcome by the student. The number of modules per semester is determined by the results that the student should achieve during the semester.

The credit-module system of organizing the educational process is aimed at ensuring the positive solution of the following tasks:

- Dividing the training material into modules, checking the mastery of each module;
- Using a knowledge assessment scale;
- Increasing the objectivity of knowledge assessment;
- Encourage systematic independent work of students throughout the semester;
- Introducing healthy competition in learning.

According to the ECTS (European Credit Transfer and Accumulation System), the academic year in European universities lasts an average of 40 weeks (30 weeks in Uzbek universities).



The total workload of a student in one year is equal to 60 credits. Based on this, a student must accumulate 30 credits in one semester.

There are several differences between the "credit unit" and the internal "academic hour" system in the republican universities. Firstly, the curricula are not the same in all universities, but if real curricula are taken, the academic hour includes not the total workload, but the classroom workload. Secondly, behind each credit unit is not the time spent, but the knowledge acquired and the competencies acquired.

In the credit-module system, a student can accumulate credits for a certain period of time to obtain a diploma. Accumulation of credits allows a student to improve their skills throughout their life and obtain additional higher education. The student accumulates credits during their studies and the credits do not disappear. Even if a student is expelled from a higher education institution for some reason, the accumulated credits can be used to continue their studies later, and they can also be re-counted. This makes it much easier for a student to obtain a second higher education. Under certain conditions, credits allow a student to count their work experience in their specialty as a component of higher education.

The experience of calculating credits in the credit-module system requires the improvement of these approaches. This credit system is necessary to determine the volume of the educational load, the standard of time spent on mastering a course or curriculum.

The student's activity in the educational process takes into account the subject, its complexity, specialization, and other workloads.

It is recommended to distribute the training load as follows:

- the classroom load is approximately 50% of the teaching volume;
- must be 50% of the student's total independent learning;
- reading recommended literature for the course and preparing summaries 20%;
- 20% of written work;
- preparing for tests 10%.

In practice, the ratio of one test credit to the number of hours of classroom work when calculating credits varies in higher education institutions, including from 1:18 to 1:6. Problems that arise during the mechanical approach to transferring this load to credits remain. In the activities of departments, it is observed that a large number of hours are allocated to non-specialized subjects, and a small number of credits are allocated to specialized subjects. This does not allow the knowledge gained by students to be correlated with credit standards. It is necessary to reduce the number of credits (hours) for non-specialized subjects, and increase the number of hours for special subjects and modules, where students study abstracts, coursework, and a large amount of additional literature at the same time.

Also, the number of credits as a load should determine the nature of the content of the subject (learning module) and the level of its importance for the student's future professional activities. At the same time, the credit-module system has its advantages and should serve to increase the mobility of students during the transition from one educational program to another, including post-graduate educational programs. The credit payment system should take into account not only the student's academic workload, but also all his achievements, participation in scientific research, conferences, science olympiads and other events.



Using the modular principle of curriculum development, it is possible to get rid of "unimportant subjects" in the HEI component. Modules can include several courses combined according to the principle of specialization (usually depending on the competencies they form - national, instrumental, communicative, etc.). They are also formed in such a way that test units are added, partially solving the problem of division and "unification" of the curriculum.

The role of test units should be to serve a broader purpose in the educational process by assessing academic workload in units larger than academic hours. Test units:

- taking into account the relative importance of various activities for this academic subject: lectures, seminars, laboratories, etc.;
- determining the importance of a particular subject studied by a student and its contribution to the average score obtained at the end of a particular period of study;
- allows you to rank students based on their academic performance and determine their individual rating.

The load of the educational module, expressed in credits, does not have a direct equivalent in academic hours, but indicates the load of this subject within the framework of the entire educational program. The total volume of all subjects of the annual curriculum is equal to 60 credit units, and then the annual hours of study time for each subject are distributed according to the volume of hours. This method was developed by Russian scientists B.A.Sazonov (Federal Institute for the Development of Education), N.I.Maksimov (MDTU named after NAKosigin) and E.V.Karavayeva (M.V.Lomonosov Moscow State University).

Credits are assigned to all components of the curriculum (subject-related modules, internships, research projects, graduation qualification work, dissertation work, etc.). They reflect the amount of work required by the student to achieve the learning outcomes in relation to the total amount of work required to successfully complete a full academic year. The maximum weekly workload of a student is set at 54 academic hours and the weekly workload is 1.5 credit units (where 1 credit is 36 hours).

For each specialty, subjects that deepen professional training should be given more credit than subjects of a general theoretical nature that are not aimed at the formation of professional competencies. Naturally, the more important the subject, the more diverse and effective the educational load for the student should be.

Problems and solutions:

- Teachers' insufficient understanding of the system: Organize regular training seminars;
- Lack of technical means: Development of digital infrastructure;
- Low level of student preparation: Introduction of a methodology focused on independent learning;
- Incorrect planning of modules: Development of curricula with the participation of experienced specialists.

Conclusion

The credit-module system is an integral part of reforms in higher education today. This system serves not only to modernize the educational process, but also to develop the student's personal



growth, creative thinking, and independent work skills. As a result of the introduction of the credit-module system, educational programs are structured on a modular basis, which in turn allows both the teacher and the student to effectively plan their time. It also ensures transparency of the assessment system, academic freedom, and interdisciplinary integration. Students will have the opportunity to choose subjects based on their needs, which will develop responsibility and initiative in them. As a result, the higher education system will adapt to international criteria and graduates will be formed as competitive personnel. In order to increase the effectiveness of this system in the future, it is important to deeply study advanced foreign experiences, direct teachers to continuous professional development, and widely introduce digital technologies.

References

1. Uzbekistan Republic President's 2019-year 8-in October "Uzbekistan Republic supreme education system 2030-until the year develop concept confirmation about" PF-5847 numerical decision.
2. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated December 31, 2020 "On measures to improve the system related to the organization of educational processes in higher educational institutions."
3. Sherzod Mustafoqulov, Mansur Sultanov. "Why is the transition to the credit-module system necessary? Purpose, essence and advantages". Xalq so'zi (August 5, 2020). Archived from the original on May 18, 2023. Retrieved September 17, 2023.
4. "Basic concepts of the credit-module system" (April 3, 2023). Archived from the original on April 4, 2023. Retrieved September 17, 2023. Bologna Convention // NGTU Inform. 2002. N 8(114).
5. Mirzayeva, F. (2022). KREDIT MODUL TIZIMINING AMALIYOTGA JORIY ETILISHI. Eurasian Journal of Academic Research, 2(11), 479-484.

