INTRODUCTION OF INTEGRATED INNOVATIVE TECHNOLOGIES IN THE DEVELOPMENT OF STUDENT COMPETENCE IN THE CREDIT - MODULE SYSTEM

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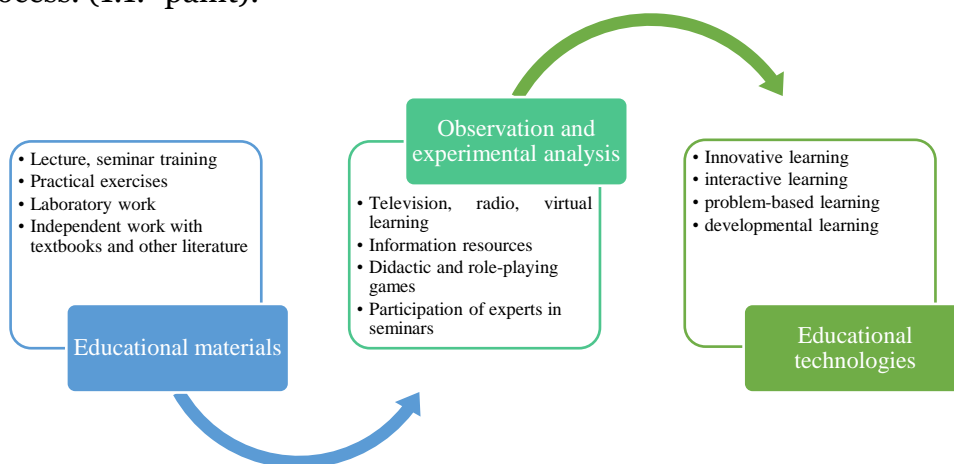Navoi State University

Abstract

The educational institution should train students throughout the academic year, as well as direct them to various activities, motivate them to achieve their desires. However, today the education system introduced in our country operates with a broad goal. Together with teaching sessions held in higher educational institutions, practical classes perform educational, educational and theoretical functions related to practice.

Keywords: Student, competence, technology, integration, innovation, problem, higher education.

Introduction

The process of using innovative technologies in higher education institutions is reflected both in the content of subjects and in the methods, means and forms of teaching. [1; 614-620-b]. Today's world education faces great challenges. The main requirement is to qualitatively raise the moral, ethical and intellectual development of the younger generation, to teach them to adapt to a rapidly changing world. At the same time, it is aimed at introducing innovative forms and methods of education into the educational process. (1.1.- paint).

1.1.- Fig. Developing student competence in higher education using innovative technologies and educational programs

The following diagram provides an algorithm for developing student competence in interdisciplinary teaching using innovative technologies and curricula. [2; 2419-2423-b.].

Monitoring the formation of knowledge, skills, competencies, and general competencies plays an important role in the educational process. In particular, monitoring functions can entail a number of

tasks and requirements. It means developing students' ability to control and evaluate their knowledge correctly, to develop their creativity in relation to the subjects they have studied, to think independently, to constantly improve their knowledge, and to make extensive use of literature. At the same time, it strengthens the bond between the teacher and the student, thus strengthening the two interconnected means of teaching. This includes the professors' dedication to lectures and practical exercises, their responsible communication and tireless work in developing assessment standards and criteria, questionnaires, test questions, and various exercises, as well as their understanding of the concepts.

The credit-module system was first introduced in the USA in the second half of the 19th century. At that time, the country's higher education institutions operated on the basis of strictly defined curricula. The curricula were mainly composed of disciplines related to the religious philosophy of that era. In higher education curricula, such disciplines that have lost their significance in practice have become a part of the curriculum. As a result, higher education was no longer a place where specialists were trained, but an institution where the wealthy class of the population at that time received education as a sign of prestige and wealth. As a result, interest in higher education among ordinary citizens of the country began to decline sharply. In 1869, Harvard University President Charles Eliot first introduced the concept of "credit hours" and during the 1870s and 1880s introduced a system that allowed the volume of subjects to be measured in credit hours. The second stage of the introduction of the "credit-hour" system began in 1892. In this regard, the US National Education Committee, in order to improve the "college-school" link and standardize the curriculum in secondary schools, introduced the concept of "credit" not only in colleges, but also for secondary schools, and later expanded the credit system for assessing the content of undergraduate programs to the master's and doctoral levels of education. The ECTS credit-module system, which is currently widely used in European higher education institutions and is being introduced in higher education institutions of the Republic of Uzbekistan, is also based on the principles of the US academic credit system. In 1987, during the London Summit of the European Union, the Erasmus (European Community Action Scheme for Mobility of University Students) program was established to support and encourage student exchanges between higher education institutions of the EU member states. The aim of this is to expand the opportunities for students studying at higher education institutions in the European Union countries to study for a year or a semester at higher education institutions in other member states. The Erasmus program developed a new credit-module system in 1989, based on the American credit system and the Dutch higher education system, and called it the European Credit Transfer System (ECTS). These rules provide for a comparative analysis of subjects offered in the curricula of higher education institutions of the European Union countries and the recognition of subjects studied at foreign universities in student exchange programs at their universities. As a result of the introduction of the ECTS credit-module system rules, student exchange between higher education institutions of the European Union countries will begin to develop. The curricula of participating higher education institutions are becoming internationally recognized.

The integration processes that took place in Europe at the end of the 20th century led to the need to support a single credit-module system in higher education institutions, and in 1999, an international forum for the development of cooperation between the ministries of higher education of European countries, known as the Bologna Process, was launched in Europe. Below is a comparative analysis of the credit systems of our country and foreign countries (see Table 1.1).

The study and analysis of the credit module system shows that it has its own characteristics in different countries of the world. However, the effectiveness and relevance of the credit-module system is largely justified by its widespread use in the education systems of developed countries, since the focus of educational programs on developing students' independent work skills allows them to be more creative and self-motivated in learning, and ultimately improve the quality of education.

Table 1.1.

Comparative analysis of foreign credit-module systems

№	Countries (credit systems)	Bachelor's degree		Master's degree		Doctorate	
		educational institution	credit hour	educational institution	credit hour	educational institution	credit hour
1	USA (USCS)	4	120	1-2	30-60	3-4	60-90
2	Germany (ECTS)	3-4 (5)	180-240	1-2	120	3	No credit
3	Great Britain (ECTS)	3 (4)	360	2	120	3	Individual
4	Sweden (ECTS)	3	120	1-1,5	60	2-4	Individual
5	Japan (UCTS)	4	180-240	2	32-60	3	12-90
6	China (UCTS)	4	120	1-2	30-60	3-4	60-90
7	Uzbekistan (ECTS)	4	240	2	120	3	Individual

In Uzbekistan, preliminary steps towards the transition to a credit-module system were also taken, with the initiative of the European Union, through the TACIS (Technical Assistance to the Commonwealth of Independent States) Technical Assistance Program for the Commonwealth of Independent States, and the Asian Development Bank's Education Reform Project in Uzbekistan, studies were conducted for implementation in 2000-2008. Starting from the 2020-2021 academic year, a procedure for transferring the educational process to a stage-by-stage credit-module system has been introduced in higher education institutions of the republic.

In higher education institutions of our republic, a credit-module system of education based on the European Credit Transfer and Accumulation System (ECTS) has been introduced into the educational process. The duration of the academic year is up to 36 weeks, of which 30 weeks are allocated to the academic period, 2 weeks to register for the selection of subjects, and 4 weeks to take certifications. According to the "Consortium on the Development of the Higher Education System of the Republic of Uzbekistan until 2030", approved by the Decree of the President of the Republic of Uzbekistan dated
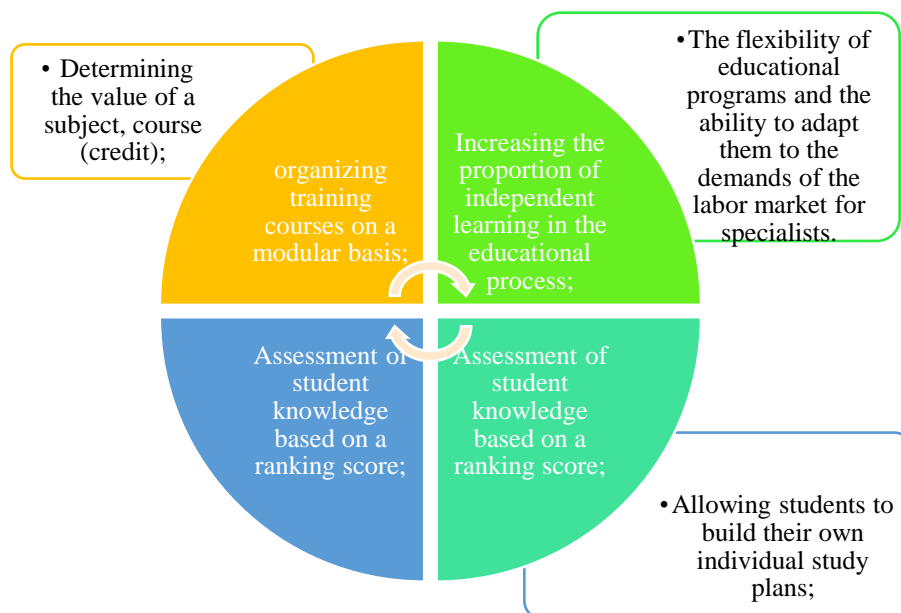
October 8, 2019, it is planned that 85 percent of universities in the country will switch to a credit-modular system by 2030. According to him, each subject taught at the university is currently reflected in credits, depending on the amount of study time it takes. For example, each subject can be reflected in an average of 5, 6, or 7.5 credits. A student can earn a certain number of credits each semester or academic year, and depending on this number, he or she will be awarded a bachelor's or master's degree.

ECTS – Yevropa Kredit Transfer Tizimiga dastlab, 1989 yilda asos solingan bo'lib, Yevropa davlatlari tomonidan ishlab chiqilgan, tekshirilgan va takomillashtirilgan kreditlarni taqsimlash tizimidir. ECTS tizimida talaba olgan bilimining bahosini bir davlatdan (OTMdan) ikkinchi davlatga (OTMga) erkin ko'chishini, erishilgan ko'nikma va malakasini erkin tan olinishini, pirovardida barchasini hisobga olib daraja (diplom) olishini nazarda tutuvchi tizimdir.

The ECTS system can be used for all types of study (daytime, evening, correspondence, distance learning) and all forms of teaching (lecture, practical, laboratory, etc.)

In the credit-module system, 1 credit is equivalent to an average of 25-30 academic hours of study. In order for a student to accumulate the corresponding credits in a given subject, he must master a certain amount of study hours. The curriculum is divided into 40-50% lecture hours and 50-60% independent work hours for undergraduates, and 30-40% lecture hours and 60-70% independent work hours for master's degrees (excluding internships and graduation projects). The number of credit hours and the number of teaching hours are determined by the higher education institution's council and must be posted in a transparent manner on the higher education institution's website. Model for improving the theoretical and practical foundations of the use of innovative technologies in higher education institutions: consisting of motivational-goal, methodological adjustments, technological processes and diagnostic components [3; 84-88-b.,4;413-417-b.].

1.2.- Fig. The main tasks of the credit-module system

The model for improving the theoretical and practical foundations of the use of innovative technologies in higher education institutions in the credit-module system consists of: motivational-targeted, methodological, technological process and diagnostic components. The credit-module system is a method of organizing education, which is a combination of modular teaching technologies and an assessment model based on credit distribution. Its implementation as a whole is a complex and systematic process.

In short, this system is aimed at the professional development and improvement of the student. It is aimed at ensuring the acquisition of knowledge throughout the life of the scholar, as well as at the formation of human capital that can meet the labor market and modern requirements.

The credit-module principle emphasizes two main issues: ensuring the independent work of students; Assessment of student knowledge based on ranking. The following are recognized as the main tasks of the credit-module system (Fig. 1.2). The purpose of Uqorida is not only to conduct lessons based on innovative educational technologies, but also to teach students to study independently, to have a positive attitude towards education, to acquire the necessary and valuable theoretical knowledge, and to form practical skills based on the demands of the labor market.

According to foreign experience, the educational process in the credit-module system consists of 2-4 modules per semester. The subjects included in the module are formed on the principle of logical complementarity, from simple to complex, from theoretical and methodological to practical. In order for a student to become a specialist, he or she must have not only information, but also the ability to process and apply it. Module-based curricula work according to a special scheme and include the following:

the purpose of the study and the full implementation of the tasks;

the requirements for the skills that the student must acquire after starting the subject (course) and completing it;

the summary assessment of teaching: the methods and means of teaching; the methods and forms of assessing knowledge.

a brief content (syllabus) of each subject included in the module, including lecture topics, a plan for seminars and practical exercises, and assignments intended to assess independent learning;

The editorial competence of the credit-module system of organizing education, as a set of its capabilities (socio-cultural, systemic, organizational, legal, and conditional), includes the following: the availability of information and content resources;

attention to identifying and eliminating the difficulties of the student and the teacher in self-educational activities;

the relationship between the teacher and the student based on cooperation, the freedom to choose the forms of organization, methods, and means of self-educational activity, the opportunity to choose the individual trajectory of the student's self-educational activity;

The educational process of students is aimed at developing skills in various forms of independent educational activity. The pedagogical competence of the credit-module system of organizing education reflects the process of forming skills in their generality. At the same time, the starting point is to

understand the credit (Credit, Credit-hour) as a unit for measuring the volume of student/teacher's academic work. One credit is equal to 1 academic hour of a student's weekly classroom work during the academic period. Each academic hour of lectures, practical (seminars) and seminar classes is divided into 2 hours (100 minutes) of independent study. What does the credit-module system give us? Transparency in education, pragmatism, and the ability to organize student-centered learning. The introduction of the credit-module system into the educational process is an important factor in improving the quality of education and attracting competitive personnel. The credit-module system allows higher education institutions to organize the curriculum, curriculum, lesson plans, student knowledge assessment, determine the work schedule of teachers, and other similar activities. We have presented a comparative analysis of traditional and credit-module education in the table below. (See Table 1.2.).

Table 1.2 Comparison of traditional teaching methods and teaching in the credit-module system

Positions	Traditional education	Credit-modular education
Objectives	1. Formation of readiness for material production and labor 2. Training of a responsible executor	1. To form readiness for transformational activities using theoretical and scientific knowledge 2. To prepare a creative transformational teacher
Main tasks	1.Providing general and professional knowledge 2.Developing skills and competencies	1.Development of the need for knowledge, formation of independent learning skills 2.Formation of students' competence
Content	Natural sciences, objects, subjects (mathematics, physics, chemistry, biology, etc.)	Integrated STEAM education (Science, Technology, Engineering, Art, Mathematics)
Structure	Directions of knowing the environment	Permanent, problem-oriented education aimed at changing the environment on a scientific basis
Advanced methods and forms	Information-reproductive, passive, group and mass, extensive, deductive	Creative, active (projects and analyses, business games, exercises, case studies, experiments, creative assignments), individual and group, intensive, inductive
The essence of teaching	Transfer, mastery and restoration of knowledge, skills and competencies according to the model	Independently acquire knowledge, skills, and competencies through the ability to perform design exercises
Priorities	Natural science, knowledge, and educational outcomes	Knowledge, methods and tools of knowledge
Interaction between teacher and students	Authoritarian, subject-object (teacher-supervisor)	Democratic, subject-subject, collaborative (teacher-advisor, assistant)
Main results	Level of knowledge in subjects (mastery, quality of knowledge)	Level of skills in the formation and transformation of student competence

In the information age, in the history of mankind, great achievements have been made in the world of industry and science. Information has become the most valuable thing in the world. The invention of the computer has facilitated the work of people. Modern means of teaching and learning have been introduced in the fields of science and education. Currently, the importance of electronic methods in this field is growing. Initially, electronic applications were in the form of simple text, but now they also incorporate various forms of imagery. In today's society, the use of information technologies is becoming a practical necessity in almost all areas of human activity. Developing the skills to use these technologies will, in many cases, ensure the success of today's student's professional career.

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