Original Article

INDEPENDENT EXTRACURRICULAR WORK OF STUDENTS OF TECHNICAL HIGHER EDUCATION INSTITUTIONS IN THE CONDITIONS OF A CREDIT-MODULAR SYSTEM

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DOI: 10.47750/pnr.2022.13.S08.405

Abstract

In educational process the wide usage of computers and informational technologies led to interactive formation of education. Interactive form of education is formed with the integrated use of not only the computer but also electronic media television. In an interactive way of learning using of multimedia technologies is very expensive, but they provide visibility. Information computer technology learning programmer expands analysis of teaching process that is reasonable using general principles in targeted training consisting theoretical basis. Classroom self-study of the student is determined by the training plan and by the programmer of learning discipline, regularized by educational timetable and held by heading the lectures, seminars laboratory work of colloquiums.

Keywords: individual work, self-study, simulation, personality, cognitive process, field work.

Introduction

One of the most important strategic tasks at the present stage of modernization of the system of higher education in Uzbekistan is to ensure the quality of training specialists at the level of international requirements. In this regard, the task of introducing the latest pedagogical technologies into the organization of the educational process in higher education to ensure a high level of knowledge focused on international standards, as well as self-improvement and personal development, becomes relevant.

Attention in the credit-modular system is focused on two its characteristics:

1) on independent work of students;

2) on the conduct of the credit-modular system of organization of the educational process and a rating system for evaluating the educational achievements of students.

In general, the credit-modular system of organization of the educational process provides for:

● modular structure of the educational program;

● the use of credits (credits) to assess labor intensity;

● use of rating systems of control by discipline;

● student participation in the formation of an individual educational plan;

● increasing the share of self-learning in the educational process;

● increasing the flexibility of educational programs.

During the pedagogical experiment, which was carried out leading higher education institutions, the amount of credit was set ECTS - 36 academic hours. The number of ECTS credits per academic discipline is determined by dividing the total amount of hours planned for the study of the discipline by the price of the credit (rounded up to 0.5 credits).

With a credit-modular system for organizing the educational process, the content of the discipline is divided into content modules (2–4 modules per semester), i.e., the academic discipline is formed as a system of content modules.

Modules are constructed as a system of educational elements, united by the sign of compliance with a specific object of professional activity. The latter is considered as a certain amount of educational information, which has an independent logical structure and content, which makes it possible to operate with this information in the process of the student's mental activity.

One of the most important elements of the modernization of domestic education can be considered its construction on a competence basis. In fact, this type of content of education is supposed here, which implies the ability of a graduate at the exit from the educational institutions to solve any professional tasks at the level of their qualifications, to have their own experience in solving life problems in many social areas.

As shown in the work of A. M. Mityaeva, the specificity of competence-based learning lies in the fact that it does not ready-made knowledge, but the conditions of its origin are traced. The student, as it were, creates the concepts necessary for solving the problem.

With this approach, learning activity, periodically moving from one into the form of research, then into the form of practical-transformative activity itself becomes an object of assimilation.

According to I. A. Kolesnikova, if the education system that existed for centuries was focused on the bearer of ready-made knowledge - a teacher, lecturer, scientist, endowing his knowledge students and listeners who knows the “recipe” for solving their problem.

Today, everyone can become a carrier and source of information, regardless of the level of education received. Students of all levels of education find themselves in a situation of independent determination (designing) of the trajectory of movement in the information field, independent creation (design) of the content of education and designing educational materials that may be required by others, as well as self-designing the educational environment. The issue of choosing content from the problem of selecting the amount of knowledge, skills, abilities turns into the task of highlighting specific professional problems and tasks, the solution of which requires a person's life and profession.

As a result, one of the ways to intensify the educational activities of students, increase their level of motivation, develop activity and creativity is the competence-based approach in education, which involves the unification of the educational process and its comprehension, as a result of which the formation of the personal position of the student, his attitude to the subject of his activities.

The main idea of this approach is that that the main result of education is not individual knowledge, skills and abilities, but the ability and readiness of the graduate for effective and productive activity in various socially

significant situations. It can be considered that within the framework of the competence-based approach, not just constant becomes the main one, and in a number of cases of excessive, increase in the volume of knowledge, and the acquisition of versatile experience of professional activity.

All of the above is reflected in the developed, approved and put into effect by the Federal State Educational Standard of Higher Professional Education of the Russian Federation on the basis of competence-based approach and credit system. This standard of the competence-credit format involves a new design of learning outcomes, which it is intended to outline at levels bachelor - specialist - master in terms of teaching load, level, learning outcomes, competencies and profile [22].

Independent work of students in the process of classroom studies consists in independent reading, viewing, listening, observing, taking notes, comprehending, memorizing and reproducing certain information. For self-study of the material at the stage of preparation for credit modules, to help students, a “Package of test tasks” has been compiled with a volume of more than 2000 tasks, which are presented in blocks and in terms of complexity within one block. Test tasks are compiled to identify causal dependence, to compare and contrast, to match, tasks with answers "correct" - "incorrect", in the form of formulas, equations, graphs and tables. Such test tasks make you think about the answer and allow you to reveal the depth of students' knowledge.

Independent work of students in the learning process is also carried out outside the classroom, because. is carried out on the instructions of the teacher and under his guidance, but without his direct participation. This happens in preparation for laboratory and practical classes, when students repeat the educational material and deepen their theoretical knowledge with the help of special literature in the library or computer teaching devices. To develop students' ability to systematic and independent work during their studies, teachers compiled special journals for preparing and performing laboratory work. When filling out the journal, students not only use previously obtained information to explain certain phenomena, processes and patterns, but also develop the ability to identify the physical meaning of the phenomenon, analyze the processes under consideration and trace their relationship with other phenomena and patterns, i.e. develop the ability to think independently.

One of the positive factors of the Bologna Process program is the strengthening of the individualization of education. To this end, 2-3 times a week during the semester, teachers of the department conduct consultative and individual classes for students. During such classes, teachers not only check and evaluate the knowledge of students, but also help organize the process of independent study of educational material that is incomprehensible to the student. The methodological materials of the department (lecture notes, collection of tasks, examples of test tasks),which are contained in the electronic educational portal of the university, help in organizing students' independent work.

In order to develop and realize the creative and professional abilities of students, increase the objectivity of knowledge assessment, introduce healthy competition in education, teachers of the department attract students to participate in scientific student conferences, scientific research of the department, help in preparing for subject Olympiads. This form of education contributes to the development of one's own self-esteem, forms the student's creative activity in solving certain problems, promotes the assimilation of the material, i.e., forms the ability to work independently.

For students who would like to deepen and improve their, as well as acquire the skills of conducting a chemical experiment, courses in the specialty "Laboratory assistant of chemical analysis" are organized at the department. The courses are designed for students who have mastered the basic course of inorganic chemistry and are aimed at developing the student's chemical thinking.

The practical implementation of the credit-modular form of organization of education is a process of continuous acquisition and use of knowledge, aimed at the formation of self-education skills, the activation of independent and cognitive activity of students.

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