

## PECULIARITIES OF THE ORGANIZATION OF INDEPENDENT LEARNING IN STUDENTS OF MATHEMATICS

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**Annotation:** While students are free to pursue a particular program in their independent study, it is important that the teacher provides the students with information on the subject, motivates them, and monitors their activities.

**Keywords:** Mathematics, independent learning, creative thinking, information age, labor market, competitive personnel.

Historically, mathematics, algebra, and geometry have emerged as sciences because of the real needs of humanity in their time, but the evolution of sciences and the needs of humanity in the new era have not always developed in parallel. That is, while some sections of mathematics are widely used in modern science and technology, some sections have lost their relevance. The experience of developed countries has shown that the most important thing is that the knowledge we acquire is focused primarily on issues that are relevant for the time. So, changes in the education system, revision of state education standards and curricula in accordance with modern needs, necessary changes are a natural and very responsible process.

Given that the basics of science are taught in general secondary education, especially in higher education, these changes must be a modern, frequent process in line with new needs. It should not be ruled out that these changes may be slightly different in each HEI, depending on the conditions of each region, if necessary. In order to adapt to these changes more quickly, each university must first be academically independent and organize education in accordance with the principles of the credit-modular system of education, as has already been proven in the world.

By 1989, a new credit-module system was developed in Europe based on the American credit system and the Dutch higher education system, and it was called the European Credit Transfer System (ECTS). Appendix 1 to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 824 of December 31, 2020 on measures to improve the system related to the organization of the educational process in higher education institutions, in higher education institutions According to the Regulations on the procedure for introducing a credit-module system in the educational process, the order of transfer to the modular system will be introduced" [2].

The transition to a credit-module system will not only create more opportunities and conveniences for the student, but also increase his personal responsibility. This can be seen in the credit-module system, where only independent study hours account for 60% of full-time study at the undergraduate level and 70% at the master's level. So, this is a system that focuses on students' independent learning. So, in this system, properly organized independent education is a key factor in increasing the effectiveness of education. In addition, those who "think better" are more successful in mathematics than those who "know more." This means that independent learning should be the most important part of the learning process for any mathematician.

The student's responsibilities in doing independent work.

- Choose the topic of the work based on the requirements of the department;
- timely completion of assignments based on a plan developed jointly with the supervisor;
- To submit independent work and reports to the department in a timely manner [3].

The final control is carried out by professors and teachers on the basis of the schedule developed by the department in order to clarify the level of mastery of the topic, the achievement of the goals of the student's independent work.

Types of control over the independent work of students and the criteria for their evaluation are developed at the beginning of the academic year and approved by the Academic Council of the faculty [4].

It is true that the reforms in the education system today are aimed at developing students' independent thinking, overcoming problems that hinder the development of creative thinking skills and the formation of practical skills in students, but students in independent learning it is important to keep in mind that it is very important for the teacher to organize the process properly, motivate the students in the process, and monitor their activities. Therefore, first of all, every professor-teacher should be well-versed in the methodology of organizing independent learning of students through innovative methods, based on the nature of the subject, and be able to adequately assist the student in this process. To this end, in order to be effective in the student's independent learning without the teacher's guidance, which is the most important thing for students, today the teacher has to decide what specific documents and information the student must provide, that is, the student who wants to learn the subject independently As for what should be in the lead.

- First of all, the student must have a syllabus - a working curriculum for the student. This is because the student needs to have a general idea of the science, albeit superficial, by knowing when, for how long, and what literature he or she can master in a given subject. In addition, the syllabus will cover everything from when to take control of the course, to when to get advice from the teacher.

- Along with the list of textbooks, at least the electronic format of the basic literature should be provided to the student.

- The set of Internet links - digest, which is necessary for mastering the subject, should also be provided to students by the teacher.

- A brief explanation of science terms - glossaries should be prepared by the teacher and given to the student. However, it is advisable to provide the student with links to such references and, if necessary, their basics in electronic form.

- A set of tasks, ie exercises (for example, problems) are very important as they strengthen the theoretical knowledge of the student, as well as develop the ability to apply their knowledge in practice. Cases related to problem situations also serve to develop the student's ability to think independently and creatively.

- Presentations or videos with logical, high-quality animations on specific topics in science increase the student's interest in science.

In short, not only modern knowledge, but also independent analysis of the received information through its advanced analytical-critical thinking, selection and use of selected information for the development of science, development of the country, the welfare of the people. As we plan to train competitive mathematicians in the labor market, it is necessary to use innovative technologies in the process, taking a responsible approach to the organization of independent education in higher education.

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