

## METHODOLOGY OF ORGANIZING INDEPENDENT WORK OF STUDENTS IN HIGHER EDUCATION

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### Abstract

This article describes the method of organizing students' independent work in subjects in higher education. The article also describes the types and ways of organizing students' independent work.

**Keywords:** independent work, methodology, types of independent work, organizational forms of independent work.

### Introduction

Introduction of digital technologies and modern teaching methods to higher education processes in the "Concept of 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 No. PF-5847 dated October 8, 2019, practical training in specialized subjects aimed at broad involvement in scientific activities, fighting against corruption, increasing the share of students studying in engineering and technical education, introducing a credit-module system, increasing practical skills in curricula specific tasks for increasing the share of training have been defined.

Currently, all higher education institutions in our republic have switched to the credit-module system. It is known that the total load of the student in the organization of the educational process in the credit-module system consists of the audience and independent educational loads. In the current educational system, a lot of attention was paid to audience workloads, but independent types of work were not popular. In the credit-module system, first of all, serious attention is paid to the independent work of the student.

60% of the study load in the credit-model system curriculum is allocated for the student's independent education.

What is meant by student independent work?

In higher education, in the credit-module system, all actions and activities aimed at educating the future specialist's way of thinking form the basis of independent work. Any type of training that allows the student to develop independent thinking and increase his cognitive activity is closely related to independent work.

The analysis shows that independent work is understood as such educational activity, in which, along with the acquisition of knowledge, the formation of skills is ensured. In practice, this is done in 4 independent types of work depending on the specific didactic goals.

The first type of private-didactic goal of independent work is the algorithm of activity, which, on the surface, consists of information and conditions of tasks, that is, to determine the skills that are formed in students and required of them based on the factors of the formation of initial



knowledge (the first stage of knowledge). To achieve this goal, it is necessary to solve the tasks perceived by students.

Independent work is the second type of private-didactic purpose. In this case, knowledge aimed at processing the acquired information in memory and performing typical tasks, that is, the second stage of knowledge, is formed.

This goal can be achieved by asking students to either describe the objects and events based on the description of selected facts, or by justifying and expressing the reason for the changes in the studied objects and events. Both this and this should be done on the basis that students can properly engage and activate the previously acquired and formed knowledge system. Students' cognitive (perception) activity consists of processing, partially redesigning and updating the content and structure of previously acquired educational information. Such re-designing and updating creates the need to analyze the described object, perform the task in different ways, find the most correct or logical consistency of them, and choose the solution methods.

The general description of all types of independent works of the second type is that in such works, the idea (principle) of solving tasks is announced, and students are required to develop this idea (principle) and apply it to concrete conditions.

The third type of private-didactic goal of independent works consists of knowledge formed by students during the third stage - solving (fulfilling) non-typical tasks.

This goal can be achieved in the process of solving knowledge (perception) issues that require students to create algorithmic bases of the causes of changes in the studied object.

Cognitive activity in the performance of the third type of independent work generally consists of gathering and demonstrating new activity experience based on previously acquired and stereotyped experience (experience of certain algorithmic actions) through the transfer of knowledge, skills and abilities. The essence of the task of this type of work is to search, express and implement the idea of solutions. It always deviates from stereotyped experiences, and in a lively process of thinking, students are asked to sort tasks based on previously acquired educational information, approaching them from a new perspective (in terms of specific task requirements).

The fourth type of private didactic purpose of independent work is to create factors for creative activity.

The cognitive activity of students in performing such work is that students go deeper and deeper into the essence of the object under discussion, find the necessary new, previously unknown ideas and solve the principles of creating new information. establishes new connections and relationships. At the same time, the student is forced to puzzle over the essence of new actions and the character of this or that information, which he has to create at each stage of performing the tasks.

The following types of independent work are noted in the literature on pedagogy:

- independent work on samples;
- reconstructive-variative;
- heuristic (partly, creative);
- creative research.

Independent work on samples is solving typical tasks, various exercises based on samples. They are a factor in mastering the material, but do not increase students' creative activity.



Reconstructive-variative independent works envisage not only the practical description of knowledge, but also the redevelopment of the structure of knowledge, the involvement of existing knowledge in solving problems.

Heuristic independent work is related to the solution of some issues and problems posed in lectures, laboratories, practical exercises, seminars.

Independent research works aim at the ability to see a research problem, express it independently, determine a hypothesis, develop a plan for solving the problem, and solve it.

Creative research work. In such cases, the task is to create conditions that require the occurrence of a problematic situation. In his work, the student searches for ways to solve the problem, free from ready-made examples. Such work includes tasks related to setting up experiments, designing equipment, models, and machines.

Thus, independent work is the most important method of teaching, in which students' individual activity increases in the process of preparing for classes and strengthening the acquired knowledge, skills and abilities.

The main conditions for effective organization of independent work are as follows:

- scientificity of independent work, its research character;
- the formation of the need to further improve their knowledge independently;
- individualization of tasks of independent work;
- methodical management of the organization of independent work.

Conditions for students to do independent work:

1. Directly in the audience - during a lecture, practical training, seminar or in the process of giving tasks on laboratory work;
2. Giving advice during direct communication with the teacher outside of the class schedule, in the process of creative communication, performing individual tasks in debt relief, etc.
3. During the performance of educational or creative tasks by the student in the library, at home, in student houses, in departments. The boundaries between these types of work can easily overlap without being too rigid. It is worth noting that independent work of students can be done both in the auditorium and outside it. Independent works outside the auditorium take a central place

The main goal of the student's independent work is to form and develop the knowledge and skills necessary for the student to independently perform certain educational tasks under the guidance and supervision of the teacher.

The tasks of the student's independent work are as follows:

- to acquire the skills of independent assimilation of new knowledge;
- finding the necessary information, identifying convenient methods and tools;
- effective use of information sources and addresses;
- work with traditional educational and scientific literature, regulatory documents;
- work with electronic educational literature and data bank;
- purposeful use of the Internet, determination of a rational solution to the given task;
- database analysis;
- preparation of work results for the exhibition and processing based on the conclusion of the exhibition, a systematic and creative approach to completing assignments;
- justifying and defending the developed solution, project or idea in a team of experts.



Organizational forms of student independent work.

When organizing a student's independent work, the following forms are used, taking into account the characteristics of a specific subject (course), as well as the level of academic mastery and ability of each student:

- some theoretical topics independently with the help of educational literature mastering;
- preparation of information (abstract) on the given topic;
- preparation for seminars and practical trainings;
- preparing for laboratory work;
- perform accounting and graphic works;
- preparation of qualification thesis and master's thesis;
- applying theoretical knowledge in practice;
- finding solutions to existing problems in practice (case study);
- creating layouts, models, works of art, music and samples;
- preparation of scientific articles, conference abstracts;
- depending on the characteristics of the taught subject, other forms can be used to organize the student's independent work.

The form, content and volume of the student's independent work are expressed in the science program and syllabuses for academic subjects.

Necessary methodical guide, instructions and recommendations are developed for students of subjects to perform independent work.

Work on test questions, tasks and exercises for independent work is mainly done independently.

The results of this work are analyzed and evaluated in the classroom (practical and laboratory) under the guidance of the teacher.

Therefore, independent work and classroom training complement each other and ensure students' approach to work.

Factors of students' interest in independent work.

Active independent work of students can be realized only if there are serious and stable interests. The most serious factor in this is preparation for the future effective professional activity. Let's consider the internal factors that allow students to activate their independent work:

1. The usefulness of the work being done. If the student knows that the results of his work can be used in the lecture process, methodical guide, laboratory work or practical training, in the preparation of articles, his attitude towards the work he is doing will change dramatically for the better, and the quality of the work will also change. increases. Accordingly, the student should be mentally prepared for this work, the necessity of the work to be performed should be shown.
2. Student's participation in creative activities. This can take many different forms. In particular, scientific-research works, artistic works, methodical works, etc. conducted by the departments.
3. Participation in science olympiads, scientific-research works, practical work competitions, etc.



4. The use of interesting factors in the control of knowledge (rating, tests, non-traditional exam forms, etc.) These factors create the spirit of competition in appropriate cases. This situation itself forms and develops the student's internal need to work on himself and develop himself. The first is to increase the role of independent work in classroom training. In order to achieve this, professors-teachers are required to develop methods and forms of organizing audience classes that ensure the high level of independence of students and the quality of training. The second is to increase the activity of students in independent work in all directions outside the classroom.

Increasing the activity of students in activities outside the classroom is connected with a number of difficulties. This is often manifested in a professional or psychological direction. In addition, it is possible to add bad information supply. In many cases, information supply is not at the level of demand, as a result of which there is a decrease in efficiency.

The main task in the organization of students' independent work is to create psychological and didactic conditions for the development of intellectual initiative and thinking in any form of training. The main principle in the organization of student independent work should be to ensure that students move to individual work. In this case, it is important to move some tasks from formal and passive performance to conscious and active performance.

In the study of any subject, three interrelated forms of organizing students' independent work are noticeable:

1. Independent works outside the auditorium.
2. Independent works in the Auditorium. It is organized directly under the leadership of the teacher.
3. Creative. Including scientific and research works.

The types of implementation of independent work by students can be extremely diverse, these are:

- preparation of abstracts, lectures and written works on the given topic related to individual chapters of the subject being studied;
- preparation of illustrative materials on the chosen subject, in which the topic is given by the teacher, the content and form of the unit, execution is determined by the student;
- creation of scientific crosswords, the size, complexity, content of which is determined by the student himself;
- write a review of the scientific monographs of modern scientists, the works of writers, highlighting the main ideas and rules, with a personal assessment and a recommendation for use;
- performing various homework tasks, including solving exercises and problems, translating or retelling the text, selecting and studying literary or scientific sources, drawing up various tables, performing graphic work, performing various calculations, etc.;
- performing individual assignments aimed at developing student initiative and independence. Individual assignments can be received by each student or a group of students;
- completing course work, graduation qualification work;
- preparing for scientific-theoretical or scientific-practical conferences, competitions, Olympiads.



In order to form and develop a positive attitude towards students' independent work, the specific goals and tasks of the work should be explained at each stage, and students' understanding of these goals and tasks should be monitored. These works will be the basis for the student's ability to independently set goals and tasks, as well as the formation of skills and abilities to choose goals.

Equal half of practical sessions, i.e. 50% of a pair, should be spent on independent performance of problems and exercises. It can be organized as follows:

1. Teacher's introduction. (objective of training, main issues)
2. Quick survey.
3. Do 1-2 problems or exercises near the board.
4. Independent completion of issues and assignments.
5. Work on errors and shortcomings in the performance of tasks. (at the end of the current lesson or at the beginning of the next lesson). It is advisable to have a large bank of independent work and tasks during training. It is even better if they are divided according to the level of complexity.

Depending on the nature of the subject, the following methods can be used when conducting classes:

1. Giving a series of tasks that are the same according to the level of difficulty. In this case, the student who completed the most exercises in a certain period of time will receive a high grade.
2. Tasks of different levels of difficulty are given. The grade is determined by the type of assignment.
5. Methodological support and control aimed at the implementation of independent work of students.

Therefore, it is important to effectively organize independent work in the training of future specialists in higher education.

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