

towards mastering physics is formed, as well as the necessary competences [1, 2].

We should underline that it is necessary to use modern interactive forms of training from the junior courses, as during this period scientific foundation is formed and competences, required for self-development and formation of personality.

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INDEPENDENT WORK AT HIGHER EDUCATION INSTITUTIONS

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The article deals with a form of learning in higher education institutions – independent work, its goals and objectives, substantiates the necessity of improving its forms and control.

The contemporary system of higher education raises many challenges, the most important of which is to improve the quality of training specialists. The graduate should be creative and fluent not only in his or her specialty, but also be fully conversant in allied domains and willing to continuous professional development, initiative, social communicativeness and mobility.

It is impossible to solve this problem without increasing the role of independent work of students in the learning process, increasing the responsibility of the teacher for the development of skills of independent work in students and growing their creative activity. The student must not only master the skills and experience of using the knowledge gained from the teacher, but also be able to conduct an independent search for the information he or she needs professionally.

Introduction an increased proportion of independent work in educational process actively promotes modernization of educational process.

According to A.A. Mirolyubov, independent work is a variety of individual or collective activity of students during in-class and extracurricular classes and at home without the direct involvement of a teacher, but according to his or her instructions. Students' independent work is based on the principles of independence, didactic and creative orien-

tation, goal-oriented planning, person-centered and activity approach.

The main objectives of students' independent work are:

- systematization and consolidation of book knowledge and practical skills;
- deepen and broaden the knowledge acquired;
- development of cognitive abilities and activity of students;
- development of research skills;
- formation of abilities to self-development, self-improvement, self-realization.

In the educational process of higher educational institutions, the independent work of a student can be implemented in the following forms:

- in-class independent work (carried out during academic studies under the guidance of a teacher and in accordance with his or her assignments);
- extracurricular independent work (carried out by a student in accordance with the teacher's assignments, but without his or her direct involvement);
- research work (participation in scientific research, experimental work).

In-class independent work may be varied: during practical studies and recitations, various types of independent work help make learning more interesting. To control retention of material by, the teacher can use quick tests (multiple-choice items), which are carried out within 5-10 minutes.

“Simulation exercises” is being used now as one of the various forms of students' independent for practical training. The theme of the exercises is usually related to specific practical themes and is of applied nature. It can include tasks of situational modeling on topical issues.

The purpose of a simulation exercise is creating opportunities to develop different versions of the situation and make decisions under simulated conditions.

Carrying out a laboratory-based practical, as one of the learning activities, contains a lot of opportunities for application of active learning approaches and organization of students' independent work.

Extracurricular work may include: reading of recommended sources, their written abstracting, problem solving, written answers to questions proposed, doing of computer practicum, tests, preparation for speaking at seminars, student conferences, writing tests, course papers, and theses.

The Internet resources allow creating a system of independent work, which stimulates cognitive activity of students, facilitates their successful assimilation of the program of academic disciplines (T.S. Volchetskaya). In this case, it is possible to use the following information technologies:

- search for information on the Internet (using a database, using information retrieval and reference systems, automated library systems, electronic journals);

- organization of a dialogue on the Internet (using e-mail, image editors, real-time and deferred conferences);

- establishment of web-pages by topic.

The independent work of a student has to be controlled. The control may take the following forms:

- control on the form of testing;
- statement at recitations, conferences, participation in a simulation exercise, academic competitions, etc;
- Course papers, tests and theses defense;
- inclusion of the material proposed for self-study in examination papers questions.

The criteria for assessment of the progress of a student's extracurricular independent work are: the level of students' familiarization with educational material; ability to use theoretical knowledge in carrying out practical tasks; well founded nature and clarity of answering.

Thus, independent work is one of the forms of teaching students in higher educational institutions.

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