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FUNCTIONS OF DEVELOPING INDEPENDENT LEARNING SKILLS IN AN INFORMED LEARNING ENVIRONMENT

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In the "Explanatory Dictionary of Pedagogy", the concept of "independent cognitive activity" is considered as a form of education aimed at strengthening the skills to be acquired, learning additional material. At the same time, the concepts of "Independent cognitive activity", "Self-education", "Improving independent cognitive activity" are used in scientific and educational literature as synonyms.

During the observation of the educational activities of the students studying in the higher education system, it was found that the improvement of independent cognitive activity is considered to be a motivating force, a conscious interest, and an arousing force. Conscious interest is the most important indicator of independent activity, a high level. This is due to the level of skill of the teachers teaching mathematics, and students are interested in this or that subject or professional specialty.

In some literature, the main part of the differentiation of independent cognitive activity in two directions is explained as follows: compulsory - in training sessions and their preparation, in addition - it is carried out on the basis of a personal plan, separate from the compulsory educational work, based on personal interests and intentions. For example, the classification of independent cognitive activities for didactic purposes:

- a) acquiring new knowledge (laboratory work, working with textbooks, working with distribution and demonstration materials, using advanced and new tools and teaching methods);
- b) improvement of knowledge through repetition, integration and practical application (textbook, working with practical exercises, solving experimental, qualitative and quantitative tasks);
- c) work related to the control, verification and evaluation of acquired knowledge (written work, supervision, control and management of experimental work, etc.).

During the first type of work, the experience of strengthening knowledge is accumulated, and the necessary conditions are created for the successful completion of the following work.

Independent cognitive activity is carried out with the help of questions and tasks.



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Usually, tasks are structured from simple to complex, and each task is aimed at the implementation of a specific didactic goal . Separate types of independent cognitive activity are interrelated and can be combined under certain conditions.

It is known that didactic principles form the theoretical basis of education. Therefore, when approaching the improvement of independent cognitive activity of students , it should be based on the following didactic principles developed by the theory of education:

1. Scientific principle. The importance of this principle is that the material of each subject studied in mathematics should be theoretically sound, that is, based on previously learned mathematical concepts , actions and theorems . A scientific principle must meet the following requirements:

- learned mathematical concepts, definitions, axioms and theorems should be expressed simply and clearly;
- teaching a critical approach to every subject material studied in mathematics.

In this context, the principle of science refers to the study of truth in the process of mathematics, as they appear in the field of science.

2. The principle of demonstration depends on the nature of the development of thinking from precision to referent. One of the goals of teaching mathematics is the development of logical thinking. Visibility increases interest in scientific knowledge, helps to master educational materials, and also helps to strengthen mathematical knowledge.

3. The principles of the introduction are to teach students to acquire educational materials meaningfully. It helps to teach understanding of different facts and also to identify connections between facts. The importance of this principle in mathematics education is that if the principle of use is violated in the process of assimilation, then the acquired knowledge is formalized.

4. Principle of activity. The importance of this principle is that each stage of teaching mathematics should be based on the developing nature of education, which in turn constitutes the active intellectual activity of students. It is impossible to achieve a meaningful assimilation of knowledge without an active thinking process , so the main goal of mathematics is to form an active thinking activity. This task in the process of learning the subject it is better to formulate problem situations to perform

5. Systematic principle . Regular presentation of mathematical material is important because logical connections between known facts are essential.



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According to a number of scientists, the main criteria of personality include responsibility, individuality, integrity, personal dignity, and others. That is, a person is a person who actively assimilates and enriches his social nature. The level of personality formation is manifested and formed in activity and communication.

In our opinion, the main goal of teaching in higher education institutions is not the process of filling the specialist with knowledge, but the formation of a specialist as a specialist. It should be noted that the most important criteria for achieving this goal is the active creative activity of students, and the task of teachers is to fulfill this task. Implementation and management, will consist of developing a series of activities that ensure its effectiveness.

1. The factor of students' interests and abilities. New knowledge is well repeated if students understand their tasks and show activity in their implementation. When setting goals and objectives, students' interest in developing independent learning skills, their abilities, and their desire for self-awareness should be taken into account. In order to perform independent cognitive activities, he must meet these requirements with interest. Enhancing cognitive interest is a very complex task, and the results of the educational process of students depend on solving the problem.
2. Uniqueness of education and knowledge activity. It is necessary to select them in order to obtain information - this is a selective, subjective process. It is impossible to explain their basic meaning and transfer information until students are interested in science. Independent cognitive activity, as a rule, significantly increases this interest and it can be divided into three components: 1) activity of independent thinking in lectures, practical exercises, consultations, personal conversations; 2) internal foundations of interconnection of all methods and forms of education; 3) learning activities during extracurricular time.
3. Educational purpose. Psychologists have proven for a long time: this work is based only on internal needs and motives, with the desire to mobilize all its forces for successful implementation.
4. Social factor. The formation of student independence is related to the development principles and laws of society. The high social importance of professional activities in connection with his professional training creates special demands for self-development of students.
5. Level of development of self-control. Systematic internal control of the results of independent cognitive activity is necessary. Always follow up, Assignments should be carried out in accordance with the level of students' mastery.



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6. It depends on the level of students' development, mathematical knowledge, their level of knowledge, skills, and readiness to improve their skills .

7. The level of computer literacy is also a factor influencing the development of independent cognitive activity skills . A large amount of information can be obtained from the Internet, as well as software packages, automated training courses, and electronic textbooks that expand the possibilities of self-study.

To understand this principle, it is necessary to take into account the factors affecting the development of independent cognitive activities .

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