

ORGANIZATIONAL STRUCTURE AND SPECIFIC ASPECTS OF STUDENTS' TECHNOLOGY "IMPROVEMENT OF THE METHODOLOGY OF INDEPENDENT WORK ACTIVITY IN THE INFORMATIONAL EDUCATIONAL ENVIRONMENT"

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Abstract:

The importance of the problem in the teaching of mathematics is very great, and it is appropriate to use practical and non-standard problems in the educational process to increase students' interest in mathematics, to form the basis and competences related to science.

Keywords. Information, experience, skills, technology, method.

TALABALARNING "AXBOROTLASHGAN TA'LIM MUHITIDA MUSTAQIL ISH FAOLIYATI METODIKASINI TAKOMILLASHTIRISH" TEXNOLOGIYASINING TASHKILIY TUZILMASI VA O'ZIGA XOS JIHATLARI

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Annotatsiya. Matematika fanini o'qitishda masalaning ahamiyati juda katta bo'lib, talabalarda matematikaga bo'lgan qiziqishini orttirish, tayanch va fanga oid kompetensiyalarni shakllantirish uchun ta'lim jarayonida amaliy va nostandart xarakterdagi masalalardan foydalanish maqsadga muvofiq.

Kalit so'zlar. Axborot, tajriba, ko'nikma, texnologiya, metod.

Абстрактный

Значимость проблемы в преподавании математики очень велика, и для повышения интереса учащихся к математике, контроля основных и математических компетенций целесообразно проводить в учебном процессе практические и нестандартные задачи.

Ключевые слова. Информация, опыт, навыки, технология, метод.



To plan, organize and create all the necessary conditions for students' independent work in an informed educational environment, to teach students to study more during classes, to see ways to gain knowledge. showing, giving a referral for independent work is one of the main tasks of a higher education institution.

Experiments show that in an informational educational environment, a student can learn deeply only if he is engaged independently and works tirelessly on himself. The main skills that students need to acquire are formed only in the process of independent work, the ability to work independently develops, and interest in creative work appears in them.

In the course of the experiments, the current state of improving independent work in the higher education system, ways to increase efficiency, possibilities of using technologies, scientific research works of republican and foreign scientists were analyzed, and it was emphasized that the following should be given importance: determining the purpose and content of independent work in mathematics ; develop and monitor the criteria for determining the level of independent acquisition of skills that students must acquire, and develop oral question-and-answer, written work, and test tasks to assess the quality of acquiring knowledge and professional skills; use and implementation of the technology of invariant tests, problem-based teaching methods, interactive methods created in the preparation of different forms of test tasks. Creation of objective conditions that enable independent work (modern educational equipment, technical tools, curriculum, textbooks, educational and methodical manuals, visual aids); to improve the pedagogical knowledge and skills of mathematics teachers, to provide information on the theory of pedagogical technologies, to develop their special knowledge, to decide on a new technological approach to improving independent work; use methods, forms and tools of independent work in mathematics; it was decided to carry out the tasks of serious preparation for training. In determining the connection between theory and practice, it was emphasized the importance of practical training, which requires practical skills and skills from students, and is carried out through exercises in improving the following independent work activities: connection with the information of the previous lesson problem solving; solve problems different from model problems; searching for and finding solutions to problems related to information in other subjects; create independent problems and expressions using theorems and rules; explaining different phenomena from others, justifying the difference and similarities by comparing several phenomena; work on correcting and eliminating errors; preparation of materials, drawings, tables; writing abstracts and lectures in classes.

In determining the content of improving independent work in an informed educational environment: taking into account the directions of higher education, inculcating the basics of mathematics in the content, forming the skills of students to apply independently acquired knowledge in practice, developing their activities, increasing the number of textbooks, mathematics the importance of improving the pedagogical knowledge and skills of science teachers, popularizing and putting into practice the best practices was emphasized.

In the informational educational environment, independent work in mathematics is a component of the educational process at a higher educational institution, and it is carried out in the following areas:



Independent work on the topic and material of the lecture in mathematics in an informed educational environment: organize your notes (summary) after the lecture in order to understand and understand the main concepts presented in the lecture, important mathematical issues citation, recommended educational literature, e-literature, making corrections and completing their notes by studying the first sources, obtaining additional texts from the read sources.

Improving independent work in the field of preparation for practical classes, seminars and laboratory work from mathematics in an informed educational environment: organizing information, creating questions, preparing answers, creating training projects, questions and answers, participating in discussions, practical getting ready to do things.

Independent work on the completion of educational and cognitive assignments on writing abstracts, lectures, coursework in mathematics in an informed educational environment.

Independent work in the field of mathematics supervision (current, intermediate, final supervision) in the informational educational environment.

Independent performance of educational and cognitive tasks related to professional practice in mathematics in an informed educational environment: pedagogical practice, educational and cognitive tasks related to production practice are among them.

Independent work related to the study of a special course and special seminars in mathematics in an informed educational environment: reading and studying the literature on the topic of the lecture, preparing a text on an issue, giving a lecture such as preparing for winter.

In higher education, in the informational educational environment, the forms and methods of independent activities in mathematics are diverse, and they are the basis of independent study of the subject (field): annotating scientific literature, creating a synopsis of primary sources, abstract and writing a lecture, completing course work and graduation qualification work, conducting experiments outside the audience and analyzing the obtained quantitative results both quantitatively and qualitatively, etc. However, theoretical and experimental courses and graduation theses differ sharply in their originality, scope and level of mathematical conclusions.

The importance of the problem in the teaching of mathematics is very great, and it is appropriate to use practical and non-standard problems in the educational process to increase students' interest in mathematics, to form the basis and competences related to science. One of the shortcomings observed in the teaching process is that students solve similar problems using the same method or perform test tasks by simply memorizing formulas (using notebooks) without understanding mathematics.

At the same time, tasks aimed at improving independent work have been identified in pedagogical and mathematical research, but they have not been sufficiently covered in the educational system, and practical guidelines have not been developed. Pedagogical conditions necessary for improving students' independent work have not been determined.

In the current curricula of the educational fields, the total study hour determined for the same subject is divided into two parts: an hour of lecture and an hour of independent work. The classroom hours are allocated in the curriculum for classroom activities (lecture, practical, seminar and laboratory work). The hour of independent work is given as a whole, based on



what materials the independent study of students should be based on the specific characteristics of each subject, it is referred to the study, knowledge, experience and pedagogical skills of the teachers of this subject. The description and instructions for performing hours of independent work were given in a number of regulatory documents.

Within the framework of this project, independent work in the higher education system implies that students make independent decisions about the goals of learning and how to achieve these goals - how to master the materials of the current educational programs using existing educational resources. Teachers should be able to welcome and correctly guide the aspirations of students in the formation of individual strategies in education. Does the student work more efficiently alone or likes to work together with a group of several people, does the student spend time in the library, or is it more convenient for him to use the electronic materials available on the Internet - how can the student work better, more efficiently and more comfortably in the conditions of independent work he should know well that it is necessary to organize. Students are expected to take responsibility for the quality of their knowledge.

Usually, the student perceives the teacher as a center of knowledge and a person who knows well how the student will learn. In fact, the teacher is responsible for the students only during their studies at the university, but is he always by his side? A student graduates from school and is left alone with his future. He starts working, where he and only he will have to be able to demonstrate the knowledge he has acquired and put it into practice. The laws of the modern economy in our country are setting their own conditions, and therefore knowledge cannot be limited only to ownership. It is necessary to keep up with the times, to be able to make independent decisions, to constantly work on oneself, to improve one's skills. Therefore, there is a need to educate the new generation of young students who can make independent decisions and be responsible for their own education.

Education of independent thinking students is one of the main goals of the education system of our country. The source should not be only the topics taught by the teacher in his lectures.

The student should understand and act on his own, and the teacher, in turn, should encourage students to develop research skills, the ability to search for additional information in order to deepen the mastery of the material. . Sometimes the concepts of independent study and independent work are confused.

Independent study can take place outside of the formal educational process, that is, without going to a specific educational institution, you can study independently and get education based on your own materials at home. Although this is an interesting pedagogical phenomenon, independent study (learning without going to school) is not studied in this project. In the framework of this project, pedagogical measures aimed at the implementation and development of elements of independent work in the official higher education system are analyzed in order to prepare independent thinking, educated and qualified personnel for the future of our country. The following types of independent work can be used to improve independent work in the higher education system:

repetition and problem solving. During repetition and training, the pedagogue repeats the knowledge acquired during the lesson, analyzes, summarizes, thinks, remembers, and develops skills and competencies for performing practical tasks.



independent acquisition of new knowledge. In this way, the student acquires the skills of searching for information sources, working on them, summarizing, expressing thoughts coherently, and learns the methods and methods of independent work.

doing creative work. In this, the student acquires the skills of identifying and analyzing problematic situations, making independent decisions, learns to creatively approach problem solving, prepares visual aids, and learns ways to solve tasks that require research in scientific description.

Educational tools used to improve independent work in the higher education system can be divided into the following groups: organizational tools; educational technologies, educational-methodical materials; didactic materials; information, information and communication technologies; technical training tools.

Thus, determining the goal of improving independent work in the higher education system, improving its content, and determining modern methods and methods, as well as forms and tools that guarantee the quality of teaching, are the basis for the proper organization of independent work. Ladi

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