

PROSPECTS FOR APPLICATION OF NEW INFORMATION TECHNOLOGIES IN TEACHING PROBABILITY THEORY AND MATHEMATICAL STATISTICS

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Abstract. To increase the effectiveness of training in probability theory and mathematical statistics, the possibilities of using new information technologies are considered.

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Improving the quality of students' knowledge and stimulating their interest in learning are important tasks for improving the learning process, and in connection with the standardization of education, they become especially relevant. Their solution is currently seen in enriching the content, methods and organizational forms of education. In the process of training, more attention should be paid to the formation of cognitive knowledge among students, rational methods of educational and cognitive activity: independently work with a book, conduct observations, conduct experiments, systematize and generalize their knowledge.

It is necessary to strengthen attention to experimental, practical and laboratory work, performing which students acquire skills in handling technology. It is necessary to take seriously the solution of the problem of interdisciplinary ties, revising them from the standpoint of national standards of higher education, coordinating curricula so that students have time to master the necessary apparatus by the beginning of the study of the relevant material of another course.

Success in education is largely determined by the peculiarities of the transition to an information society. The rapidly growing volumes of educational information have come into conflict with the very possibilities of assimilating it. It is not the volumes of knowledge that become very important in the training of specialists, which

are largely transferred beyond the brain to various libraries, databases, computer networks, but the methods of obtaining knowledge and the possibility of their operational processing.

The effectiveness of training largely depends on the level of professional competence of the teacher. To become an authority for students, he must have deep basic scientific knowledge and skills, modern methods and computer technologies, general erudition, pedagogical skills, a sustained style of communication, the ability to awaken the hidden capabilities of a person, faith in his students.

A modern teacher should look for and find technologies that are productive for a person. Along with justified methods, such as dialogue, search, research, such as simulation modeling, collective learning methods, micro-learning and others were born.

The requirements of society for specialists cause the need for a fundamentally qualitative reorientation of the system of their training, both substantive and organizational in nature. In this regard, a whole direction is actively developing as informatization of the vocational education system. Information approach, new information technologies are widely used in almost all areas of human activity.

The use of new information technologies in training is currently one of the priority areas of pedagogical science. Information technologies in the broad sense of the word include not only traditionally allocated quantitative systems, but also distance learning, telecommunications systems, audiovisual technologies.

Thus, in the context of the observed decrease in the cognitive activity of students, computer technology can become an important factor in the implementation of the necessary training in modern conditions, based on solving the problems posed, achieving pleasure from the process and the result of their activities.

There is every reason to believe that further informatization of education will lead not only to the improvement of ordinary forms of education, but also to the emergence of new, subject-specific methods. Great hopes are associated with distance learning, the functioning of which involves spatial temporal flexibility, individualization of training, orientation to the needs of students through the use of telecommunication technologies and multimedia tools.

The peculiarity of teaching probability theory and mathematical statistics is that this direction of mathematics is not a direct continuation of high school

mathematics. The concepts of mathematical analysis, higher algebra, analytical geometry are found in the sections of high school mathematics.

But such elementary concepts of probability theory and mathematical statistics as probability, chance, event and others are new for higher school students. Therefore, it is advisable to organize the teaching of probability theory and mathematical statistics by declaration, i.e. first, new concepts and terminology are introduced, and then students' knowledge in this direction is consolidated. As knowledge accumulates, students' thinking, creativity and independent work become more active.

Today, multimedia tools are also becoming necessary for teaching probability theory and mathematical statistics. The use of multimedia tools particularly facilitates the explanation of materials using complex formulas, tables, graphs, etc.

Methods of teaching probability theory and mathematical statistics using modern computer technologies and multimedia tools show that the degree of perception, memorization and processing of information by students is high. They especially strengthen the creative capabilities of students to operate with objects in visual and graphic interaction, using the available knowledge about random quantities, functions, processes.

As an illustration of the above, it can be emphasized that in presentation slides created through Microsoft PowerPoint, various sections of text, graphs are highlighted with different colors and styles, appear on the screen using various visual effects of animation with sound.

Given the above facts, we can conclude that the use of multimedia tools in teaching probability theory and mathematical statistics is becoming more and more relevant. Here, undoubtedly, a decisive role is given to a personal computer, which is a source of presentation of educational material, conditions for experimentation, serves as a library, a center for obtaining reference information and a communication center.

The main task of higher educational institutions is to prepare a new generation for life in modern information conditions, for the perception of various information, to teach a person to master the way of communication using multimedia means and modern information technologies.

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