# Design in the process of teaching mathematics and its teaching methodology

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**ABSTRACT**

This article studied the comparative analysis of the drafting of the educational process of higher educational institutions in foreign countries and the Republic and its implementation in practice, using as a template the methodology for designing the educational process of Mathematical Sciences in higher educational institutions of the Republic and using them in educational practice.

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| **Keywords:** | Educational technology, pedagogical technology, methodology, technological approach, educational technology model, mathematics teaching methodology, design I, module. |

**Introduction.** The decision of the president of the Republic of Uzbekistan dated May 20, 2011 "on measures to strengthen the material and technical base of higher educational institutions and radically improve the quality of training of highly qualified specialists"stressed the need to improve the quality of the educational process due to the implementation of modern pedagogical and information and communication technologies on the basis of accelerating the To carry out these tasks, professors and teachers working in the higher education system will be required to draw up a step-by-step project of educational activities of subjects based on the principles of modern pedagogical technology. The upbringing of a harmonious generation that meets the demand of the time through the educational and educational system depends a lot on the fact that science teachers and educators are able to design the educational process on the principles of pedagogical technology and use them effectively in educational activities. At the moment when various methods and means of education and upbringing began to be involved in the pedagogical process, it is important to design the process of teaching Mathematical Sciences. The method of pedagogical technology makes it possible to repeat correctly designed activities, and in this regard, the methodological skills of the teacher and the educator, regardless of personal qualities, create conditions for high results of educational and practical activities.

Pedagogical technology does not require strict algorithmization of activities, but gives a wide place for creative activity and creates conditions. But this creative activity will have to correspond to the essence of these methodological principles. The design of the educational process by nature assumes that there will be problems in a wide direction, covering creative and sought-after methods. These problems will be clearly oriented towards a viable and practical result. The design of the teaching process was widely used in its current modern education, and in later times the theory also penetrated into practical methodology and didactics. The design of the teaching process is one of the main forms of application of modern pedagogical technology to the educational process. Mathematical Sciences, the organization of Education based on the principle of continuity between the methodological system of teaching mathematics and its elements (educational purpose, content, methods, means, forms and processes) through the design of the educational process, provides a step-by-step achievement of the goal set in education and the expected result from it. This article studied theathematice analysis of projects of the educational process of higher educational institutions in foreign countries and the Republic on its implementation and, using as a template, devoted to the methodology for designing the educational process of Mathematical Sciences in higher educational institutions of the Republic and using them in educational practice. Currently, scientific research is carried out on the problems of effective organization of the teaching process in higher education in terms of methodology, in particular, scientific research is carried out on the preparation of specialists in the field of athematiccal education of higher educational institutions, aimed at drawing up training sessions of Mathematical Sciences and projects of educational processes. The transition to a modern social-oriented market economy is considered the main basis of reforms carried out in developed countries, and in this process, the creation of projects of the educational process based on personality-oriented

approaches and its component pedagogical technology and its principles in teaching and their introduction into educational practice is of objective importance in the higher education system. The role of education in the formation of personality maturation is incomparable, and the formation of the skills of professors and educators in the design of training and educational process of subjects taught in higher educational institutions on the basis of pedagogical technology is a requirement of the day. Although in the research work mentioned above, views of theoretical, practical and methodological importance have been advanced on some aspects of the development of Higher Education Strategies, the application of pedagogical and information and communication technologies to the educational process, the design of the educational process, the construction of training projects of subjects taught in higher educational institutions, until this time, the theoretical foundations of the design of the educational process of Mathematical Sciences on the basis of the principles of pedagogical technology in the teaching process of developed foreign countries and higher educational institutions of the Republic, and the methodology for their use in the amliyot, have not been studied as a separate object of study. From the above, the concept of a project is to devise in practice ideas about an idea, a conceived plan, etc. Project-organizational and practical work in the preparation of a product is also understood. Educational educational or organizational work, such as the week of mathematics, sports holidays, activities of "small schools", can also be viewed as design to organize in a certain direction and on a specific topic. However, it will be necessary to adhere to the design method. The design method is the technology of finding, identifying and developing problems in order to achieve a didactic goal. Design activities are among the most popular forms of organizing work with students.

In order to design the process of teaching Mathematical Sciences, Avalmbor is created tables, representing the goals set before this discipline[3], this work is carried out as follows. The first work to be done is to capture

the FA's curriculum, which is perceived as the "largest module" in the upper hieraxial tier. Sungra is brought into the form of a schedule, with the general educational and educational goals set before science. It is put as the first in the table. The general goals of the science are obliged to meet the standard of education developed for the same discipline and the requirements that society imposes on the social qualities of citizens. When determining the general goals of the academic discipline, one relies on the general and private methodological foundations outlined above. This process is carried out as follows. First, the above-mentioned requirements of the state and society for the educational system, as well as the laws and rules of the principle of dialectics and aggregate approach, are written down on the computer in capital letters and on top as a general methodological basis. Secondly, didactics is subjected to computerization of the law, rules and principles, and the rules of young psychology and psychoanalysis, and the principles of pedagogical technology. When drawing up an educational project, opening these two files and forming the general goals of the academic discipline, looking at the first file, does this goal, which is being set, meet the requirements set by the state and society for educators, and does this goal come from the laws and rules of the principle of a cumulative approach with didactics? That's what needs to be determined. Also looking at the second file, does the goal set meet the rules of young psychology and psychoanalysis, based on the laws, rules and principles of didactics?, by putting the questions that are being formulated, the goals that are being adapted to them. The second work to be done is based on the logical dependence of knowledge within the same discipline, that is, the largest module, and the completion of the thought, dividing the teaching material into large pieces and their so-called "large module". After that, the goals of each large module are set, showing the hours allocated to them and brought to the form of a table. It is put as table two. The goals of large modules are necessarily derived from the goals in the largest module and correspond to them.

The sum of hours allocated to each large module must be equal to the total number of hours assigned to that discipline. Both in the formation of the goals of large modules, as described above, general and private methodological foundations are determined, depending on the falling papers and depending on them. The third work to be done, logically related from within each large module, thus, in terms of volume, through a pair of hours of study, the knowledge that must be transmitted to students is allocated and they are called "Middle module", which also shows their educational and educational goals and is brought into the form of a schedule. It is placed as table three. When setting the goals of each medium module, the work is done without missing an eye from the paper on which the general and private methodologies are written, as above. In the second place, private tables of each pair of hours of training, that is, the middle module, are drawn up. This work is done as follows. The first work to be done is a pair of hours of training, that is, a medium module, divided into several "small" modules, taking into account the logical dependence of the knowledge given in it and the completion of the thought. Then, based on the general goals set above, the private educational and educational goals set in front of each sub-module are set, and the time allotted to each sub-module is shown. After that, at the end of this small module, the work actions that students are obliged to perform are determined. When determining work actions, the principles of pedagogical technology are used. The second work to be done, by separating the underlying concepts from the knowledge given through each medium modules, on the basis of which control questions are drawn up to assess students ' knowledge and skills, and the type and criteria of assessment are determined. It follows from the laws and rules of didactics. The third work to be done, the type and type of training used in each sub-module of the training is determined. The fourth work to be done, the pedagogical methods and methods used in each small module are indicated. The fifth work to be done, based on the information and

communication technologies available in a particular educational institution, will show the information and communication technology and didactic materials used in the implementation of the training in each small module. In the third place, according to the procedure indicated in the private tables of the design of this training session, a scenario for the implementation of the training process is written. In it, the knowledge given in each medium module is expressed one by one, indicating the type of training used in communicating them to the learners, pedagogical methods, information and communication technology and didactic materials. When writing the text of the scenario, the laws and regulations written on the above two files are followed. In the text, the places separated by obese and italic letters are recommended for students to write. The scenario is carried out on the basis of the pedagogical and student dialogue[2]. In the subsequent issues of the Journal, the scenario of the training with the general, private tables of the content of the educational sciences "methodology of teaching mathematics", "technologies of education and information and communication", which are carried out at the undergraduate stage of higher education of the article, is given.

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