

TRAINING BASED ON MODULAR TECHNOLOGIES - AS AN INTEGRAL PART OF INNOVATIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS

Izetaeva G.¹, Narbaeva R.²

Izetaeva Gulbahar - PhD in Pedagogical Science, Assistant;

*Narbaeva Raziya - Assistant Teacher,
MATHEMATICAL ANALYSIS DEPARTMENT,
KARAKALPAK STATE UNIVERSITY,
NUKUS, REPUBLIC OF UZBEKISTAN*

Abstract: *in this article, mathematical sciences category in this process of modular teaching the use of teaching technology is the based on innovative technologies in the educational process, the education system, the introduction of modular technology, which is the pressing issue of the day and the introduction of innovative technologies that will form the basis of scientific hand analysis.*

Keywords: *innovation, model, blocks, mathematic sciences, pedagogical technology, educational technology, modular training technology.*

Although teaching has been the acquisition of a certain set of knowledge for centuries, it can now be observed that knowledge becomes obsolete over the course of a generation. At the same time, the volume of knowledge even in some specialties is so large that it is almost impossible to master them on the basis of existing teaching methods. All this sets the task of educating a creative person who is able to independently receive, evaluate new information and make appropriate decisions.

Many disasters in the twentieth century are caused not only by technology itself, but also by a lack of professionalism. Education also plays a leading role in solving such problems [6].

In order to improve the efficiency of the socio-economic development of the independent Republic and implement the National training program, the Law "On education" requires the use of innovative technologies in education, including in the field of mathematics [1].

The introduction of innovative technologies in the educational process requires, first of all, the analysis of existing innovative technologies, the development of methodological recommendations for their application, taking into account the content of the taught subjects.

Implementation of the developed methodological recommendations in practice in the educational process and determining their effectiveness is important in pedagogy. The use of innovative educational technologies in the educational process requires certain training of teachers of this subject.

The introduction of innovative technologies in the process of forming methodological training of teachers, in particular, mathematics teachers in innovative teaching activities, prepares the ground for increasing the effectiveness of this process.

The use of innovative technologies in the educational process organized in higher educational institutions has the following didactic goals:

- orientation of the educational process to the person, increasing the effectiveness of their acquisition of knowledge, skills and abilities established by the state educational standard;
- improving professional and pedagogical, methodological training of students, preparing them for innovative teaching activities;
- Ensuring active participation of students in lessons based on innovative technologies and creating a base for them to acquire the necessary knowledge, skills and abilities to use innovative technologies, becoming the subject of the educational process.

The implementation of the above-mentioned didactic goals necessitates the professional training of students, improving their knowledge, skills, and the use of innovative technologies in teaching mathematics.

This requires the use of innovative technologies in the formation of professional skills of students, improving the effectiveness of the educational process, which makes them a priority in preparing for innovative teaching activities.

The study of scientific sources that reveal the essence of the problem has shown the need to improve the methodological literature that helps students acquire professional knowledge, skills and competencies. Sources in this area are particularly important because they shed light on specific aspects of the problem under study. In the field of development and improvement of innovative education in educational institutions M. Tojiev, D. Yunusova, B.A. Abdullaev, L.N. Vashenko, E. Lebedeva conducted research, N. Azizkhodzhaeva, N. Muslimov, Sh. Sharipov, O. Tolipov, O.M. Zheleznyakova, M.V. Clarin, K.B. Kolbaev contributed to the application of innovative models and methods in pedagogy.

Improving the quality and effectiveness of education, training competitive personnel is carried out on the basis of innovative pedagogical and modular training technologies and educational process projects developed on its principles, as well as modern and interactive methods used in its practical application.

An innovative educator must have knowledge of technology, the necessary knowledge and skills to create and implement innovations, promote best practices, distribute, and evaluate the results of innovation. Only then can we prepare Mature, knowledgeable, dedicated, and qualified math teachers for the future. Consequently, pedagogical technology is an educational event organized on the basis of a specific project that considers a specific targeted educational process as a systematic (integrated) and technological approach to the educational process that guarantees the results of this goal [5].

In the process of higher education of the Republic Ziemukhamedov B., M. Tojiev [5], G. Isetaeva [4], M.U. Kuchkarov, Zulfikarov, A. Alimov, M. Uralova and E. Sharipov's educational research projects are successfully being tested, because the result of teaching experience qualitative changes that meet the requirements of the reconstruction of the integrated system of education. To accelerate the transition of pedagogy to a new quality that meets the requirements of today and tomorrow, it is necessary to develop innovative education, scientific tools that flow from it, analysis and dissemination of best teaching experience.

There is an objective basis for a qualitative transition to new educational technologies for the effective organization of education, since innovative processes in economic and social life require radical changes in education itself. No teacher can be excluded from this process sooner or later. The need to integrate science, education and production, or the need to master the qualities of computerization of training, traditional methods of work of the teacher, remains an objective factor in the need for scientific and methodological justification.

It is well known that many terms derived from other fields are used in pedagogy, indicating that pedagogy is closely related to other disciplines. For example, today the factors that increase the effectiveness of training are the teacher, methods and technologies, the economy of education, and computerization of training.

There are various interpretations in the literature to determine the spiritual content of the concepts "New procedure", "News", "Innovation". The fact is that in modern language these words are very similar, and they are interpreted as a new order, method, or invention. A "New order" in the material sense is actually a positive progressive innovation, idea, activity, or material object that is new to the organizational system that accepts and uses this concept. At the same time, the term "New procedure" in the professional sense is considered as a process of creating, developing, adapting and using a new and useful result [6].

Scientific, technical, technological, and organizational changes that occur during the introduction of new procedures are defined as new procedures or innovative processes. The period when a new procedure is created, distributed, and used is called the innovation cycle. Considering various interpretations of the concept of "new procedure", we can make some generalizations.

- First, any new procedure has a practical end result, i.e. a clear direction aimed at satisfying a certain social need.
- Second, the procedure is considered as a complex process that should always be the object of forecasting and management.
- Third, the introduction of the new procedure is associated with the acceleration of research and development processes in various areas of social work.
- Fourth, each new procedure should ensure that a certain technical, economic and social impact is achieved.

Thus, the terms "New procedure" and "Innovation process" have exactly the same meaning. From the very beginning of education, innovation is combined with innovation, change, improvement and improvement of existing education. Innovations in education are not a product of recent times, but they can be considered very young as a pedagogical category.

Our ancestors also expressed their views on the problems of innovation in the educational process, the theory and practice of Abu Ali Ibn Sina, who at one time justified the innovative requirements for the teacher, was deeply innovative in its time. For example, in his book the "Address of the event", Ibn Sina stated that a real teacher should be able to determine the mental abilities of his students. Ibn Sino's pedagogical views were noted in the research works of Uzbek scientists N. N. Azizkhodzhaeva, B. Ziemukhamedov, Yu. G. Yuldashev, U. Nishonaliev, M. Ochilov, N. Saidakhmedov, O. Tolipov.

Often the term "Innovation" is used instead of similar terms. For example, reform, modernization, improvement, modernization. Although they do not fully reveal the meaning of the analyzed concept, the main thing is that they represent innovations and changes.

Let's look at the different definitions of innovation. "Innovation" is interpreted differently in dictionaries and encyclopaedias. For example, "Innovation" (Latin: *Inovatis*) means innovation, new order, change. Innovation means the introduction of something new, a procedure derived from Latin: *innovis*-means new and renewal, novelty, change. The term "innovation" is understood as novelty, renewal. Innovation is the practical use of technical and technological inventions and achievements. It is an innovation in education as a pedagogical category [6].

Yu. G. Yuldashev emphasizes that the main feature of the subject of innovation is its active self-awareness, that is, the understanding of personal initiative as a subjectively important and socially acceptable basis for its existence. The author understands subjectivity in the unity of setting goals and implementing goals. A number of

studies on innovation suggest that change is new, but not entirely new ideas or forms. Although some changes have occurred at some time, somewhere, but have a special significance in the same period and environment and stimulate the learning process, then this can be called an innovation.

In this context, B. Ziemukhamedov analyzes innovation processes, and draws attention to their relationship with the external environment [5]. At the same time, the author emphasizes that the system and structure of the innovation process changes when innovation moves from one stage to another, and R. Sh. Akhliddinov, U. Inoyatov, R. Razhabboev, I.U. Mazhidov, B.H. Rakhimov, E. Seitkhalilov, and Sh. Kurbonov associate their research with the development of updated state educational standards.

It is important to identify innovative problems related to the state educational standard. These include specifying the purpose, methodology, structure, and content of educational standards. There are studies on the introduction of information and pedagogical technologies in the training of specialists based on the use of educational standards in the education system.

Thus, in this article, we have expressed didactic, methodological, organizational and technical changes in the pedagogy of higher education, aimed at improving and improving the educational process through the concept of "Innovation" or "Innovation", the construction of educational disciplines based on the principles of pedagogical technology.

Since the continuity of new procedures is part of the social system of education, it must take into account changes in society in its development. In this context, innovation is one of the main conditions for successful implementation of the tasks facing education. Therefore, successful implementation of innovations in other areas cannot be imagined without new regulations in the field of education.

We have not been able to fully cover all areas of pedagogical research in this article. We focused only on existing trends that do not depend on changes in the socio-economic life of the main society, areas that reflect the assimilation of cultural and scientific and technical achievements in the educational process, and the effective organization of the educational process.

The number, types, nature and intensity of innovations in education depend on many factors and conditions. In recent years, special attention has been paid to the development of pedagogical science in terms of innovation. The leading innovation processes taking place in society are also reflected in education. Given that the concept of "innovation" in education is not as widely covered as in engineering and other disciplines, this concept has been described as a pedagogical category. From this point of view, the problems of pedagogical creativity are considered as an integral part of innovative processes in the educational process.

Thus, innovative technologies not only accelerate the delivery of education to the population, improve its quality, acquire knowledge, but also create conditions for its material achievement. Most importantly, this significantly improves the quality and effectiveness of education.

References

1. Resolution of the President of the Republic of Uzbekistan dated May 20, 2011. № PP-1533 "On measures to strengthen the material and technical base of higher education institutions and radically improve the quality of training highly qualified specialists".
2. *Abu Ali ibn Sino*. "Event address". T.: Mehnat, 1991.
3. *Abdullaev B.A.* Improving Innovation Activity Management: Dis. ... Candidate of Economic Sciences. Andijon: AndMII, 2002. 151 p.
4. *Izetaeva G.K.* Theory and practice of teaching mathematical sciences on the basis of modular technology. // Monograph. Under the general editorship of Doctor of Pedagogical Sciences, Professor M. Tojiev T.: "PRINTING HOUSE OF SCIENCE AND TECHNOLOGY CENTER, 2013. 172 p.
5. *Tojiev M., Ziyomhammadov B.* Application of pedagogical technology in the educational process and its role in the formation of the qualities of a harmoniously developed generation. Monograph. / T.: «MUMTOZ SO'Z», 2010. 214 p.
6. *Tojiev M., Salaxidinov R., Barakaev M., Abdalova S.* Modern information technologies in education. / Methodological aspect: new pedagogical technologies, problems, solutions and methods of assessment. Tashkent. UzPFITI, 2001.147 b.