

Technological Approach in the Manufacturing Sector: Training and Analysis

Akhmedova Aziza Akmalovna¹, Boboev Abror Khotamovich²

Abstract: The article deals with the concentrated expression of the achieved level of development, the introduction of scientific achievements into practice as the most important indicator of the high professionalism of the activity. Pedagogical technology - a set of psychological and pedagogical attitudes that determine a special set and arrangement of forms, methods, methods, teaching methods, educational means; it is the organizational and methodological toolkit of the pedagogical process.

Keywords: educational processes, pedagogical innovations, psychological and pedagogical research, generalization and systematization, activity systems, technological approach.

The development of educational processes in modern society, the vast experience of pedagogical innovations, copyright schools and innovative teachers, the results of psychological and pedagogical research constantly require generalization and systematization. One of the means of solving this problem is a technological approach, the application of the concept of "technology" to the field of education, to pedagogical processes.

First of all, it is necessary to proceed from the most general, meta-subject understanding of technology as a scientifically and / or practically substantiated system of activity used by man in order to transform the environment, the production of material or spiritual values. In the twentieth century, technologies based on the achievements of physics, chemistry, energy, biology, mathematics, computer science and other sciences have made a technological revolution.

The technological approach in the manufacturing sector - the presentation of production processes as technologies - has become an integral feature of modern material production. It acts as a concentrated expression of the achieved level of development, the introduction of scientific achievements into practice, the most important indicator of the high professionalism of the activity.

The application of the technological approach and the term technology to social processes, to the field of spiritual production - education, culture - is a new phenomenon for social reality in our country.

The concepts of "educational process", "educational technology" (technology in the field of education) are somewhat broader than the concepts of "pedagogical process", "pedagogical technology", because education includes, in addition to pedagogical, also a variety of managerial, social, cultural, psychological and pedagogical, medical-pedagogical, economic and other related aspects of the social sphere. But there is no unambiguous interpretation of these terms; Thus, educational technology is sometimes understood narrowly - as a technology of the educational process. In foreign literature, the use of these terms has similar spellings: "technology in education" ("technology in education"), "technology of education" ("educational technology"), "educational technology" ("pedagogical technology"). In what follows, we will, sometimes neglecting their differences, use both terms interchangeably.

An important place among these areas is occupied by a technological approach to learning, which provides for precise instrumental management of the educational process and guaranteed achievement of the set learning goals.

¹ senior teacher, Tashkent Institute of Chemical Technology

² Assistant, Department of Uzbek language and professional education, Tashkent Institute of Chemical Technology



The technological approach opens up new opportunities for the conceptual and design development of various areas and aspects of educational, pedagogical, social reality; it allows:

- to predict results with greater certainty and manage pedagogical processes;
- analyze and systematize on a scientific basis the existing practical experience and its use;
- comprehensively solve educational and socio-educational problems;
- provide favorable conditions for personal development;
- reduce the effect of adverse circumstances on a person;
- optimal use of available resources;
- choose the most effective and develop new technologies and models to solve emerging socio-pedagogical problems.

According to the Japanese teacher T. Sakamoto, the technological approach is the introduction of a systematic way of thinking into pedagogy. However, it should be noted that the technological approach to educational and pedagogical processes cannot be considered universal, it only complements the scientific approaches of pedagogy, psychology, sociology, social pedagogy, political science, etc.

There are big discrepancies in the understanding and use of the term "pedagogical technology", among which four positions can be distinguished. Pedagogical technologies as the production and use of apparatus, educational equipment and TCO for the educational process.

Pedagogical technology includes "from chalk and blackboard" (R. De Kieffer) to "everything that can be plugged into a socket in the wall" (M. Meyer).

Pedagogical technology - a set of psychological and pedagogical attitudes that determine a special set and arrangement of forms, methods, methods, teaching methods, educational means; it is the organizational and methodological toolkit of the pedagogical process (B.T. Likhachev).

Pedagogical technology is a new type of teaching aids (S.A. Smirnov).

Pedagogical technology is a set of means and methods for reproducing theoretically substantiated learning and upbringing processes that make it possible to successfully achieve the educational goals set ("Russian Pedagogical Encyclopedia").

The Glossary of Terms on Educational Technology (Paris, UNESCO, 1986) states that, in its original sense, educational technology means the use for pedagogical purposes of the means generated by the communications revolution, such as audiovisuals, television, computers and other media.

B. Skinner, S. Gibson, M. Gillette, T. Sakamoto, V. Hag., represent the second position. They believe that pedagogical technology is a process of communication or a way of accomplishing a learning task, involving the application of behavioral science and systems analysis to improve learning.

Pedagogical technology is the systematic use of people, ideas, educational materials and equipment to solve pedagogical problems (S. Gibson).

Pedagogical technology is a meaningful technique for implementing the educational process (V.P. Bepalko).

Teaching technology is an integral procedural part of the didactic system (M.A. Choshanov).

Pedagogical technology is a strictly scientific design and accurate reproduction of pedagogical actions that guarantee success (V.A. Slastenin).

Pedagogical technology is a well-thought-out model of joint pedagogical activity in designing, organizing and conducting the educational process with the unconditional provision of comfortable conditions for students and teachers (V.M. Monakhov).

The new paradigm of education, which puts the development of the student's personality at the center of the educational pyramid, aims not only at new learning technologies, but also at new technologies



for organizing the educational process. Under the "new" pedagogical technologies, we mean not their time aspect, but their difference from the usual, traditional technologies.

Traditional methods of organizing the educational process are aimed at creating conditions that are more conducive to the assimilation of factual material, consolidating the skill of reproducing knowledge in a familiar situation. Let's consider what tasks are solved by means of modern technologies for organizing the educational process.

Collective learning technology

The relevance of this pedagogical technology is determined by the fact that it offers a way to resolve many urgent problems and contradictions of modern education. Technology advantages:

- collective learning forms and develops the motivation of students in cooperation;
- collective learning includes each student in active work for the entire lesson, in shift pairs and microgroups;
- collective ways of learning create conditions for lively, easy communication;
- in the lessons of collective learning, the educational mutual influence of students is welcomed;
- with collective learning, the student can come
- to the class in any month of the school year and pass an exam in academic discipline at any time;
- The student becomes a teacher's assistant or an independent examiner, each student and the entire class as a whole become subjects of self-learning.

The basic principle of technology is that in the student team everyone teaches everyone and everyone teaches everyone. The main methods of collective learning methods include: the study of textual material in any academic subject; mutual transmission of texts; interchange of tasks; mutual dictations; learning poems in shift pairs; performing exercises in pairs, etc. [3].

Information Technology Education

Information technologies of education (IT) can be defined as a set of electronic means and methods of their functioning used for the implementation of learning activities. Electronic means include hardware, software and information components.

In the process of learning at school with the help of IT, the child learns to work with text, create graphic objects and databases, and use spreadsheets. The child learns new ways of collecting information and learns to use them, expanding his horizons. When using IT in the classroom, the motivation for learning increases and the cognitive interest of students is stimulated, the effectiveness of independent work increases. The computer, together with IT, opens up fundamentally new opportunities in the field of education, in learning activities and student creativity. For the first time, a situation arises when IT training becomes the main tools for a person's further professional activity. Education is truly integrated into life throughout its course.

One of the brightest examples of the use of IT in education is interactive lectures using multimedia learning technology.

Compared to the traditional lesson-lecture, when the teacher presents the topic, and the students listen, watch, memorize or outline the educational material, a lecture built according to the proposed methodology has an important advantage - interactivity. Interactivity gives students the opportunity to actively intervene in the learning process: ask questions, receive more detailed and accessible explanations on sections and fragments of the teaching material presented by the teacher that are unclear to them.

Multimedia technology is understood as a set of hardware and software that ensure that a person perceives information simultaneously with several senses. At the same time, information appears in the



most familiar forms for a modern person: audio information (sound), video information, animation (animation, animation).

The combination of teacher's comments with video information or animation significantly activates students' attention to the content of the teaching material presented by the teacher and increases interest in new knowledge. Learning becomes entertaining and emotional, bringing aesthetic satisfaction to students and improving the quality of the information presented by the teacher. At the same time, its role in the educational process changes significantly. The teacher uses the teaching time of the lecture more efficiently, focusing on the discussion of the most complex fragments of the educational material.

The interactive lecture combines the advantages of a traditional teacher-led learning method with individual computer-assisted learning. The computer turns from a "teacher" into an active teacher's assistant. Along with information and cognitive content, an interactive lecture has an emotional coloring due to the use of computer slides in the process of its presentation [3].

Modern pedagogical technologies

- 1) Information and communication technology
- 2) Technology of critical thinking
- 3) Design technology
- 4) Problem learning technology
- 5) Gaming technologies
- 6) Case - technology

It follows from the above definitions that pedagogical technology is a category of pedagogy that has a high degree of generality, generalization, and stereoscopicity. Using the terminology of V.V. Davydov, pedagogical technology can be called a meaningful generalization, absorbing the meanings of all the above definitions, including the genetic roots of the concept.

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