

Organization of Technological Educational Processes in Subject Technology on an Innovative Basis

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Annotation:

This article recognizes that the features of the formation of innovative skills in students, the importance of systematic approaches in the educational process, the connection between the level of knowledge of students and the effectiveness of educational processes of educational institutions and the relationship between them are a holistic system.

Also, the project of pedagogical processes as a complex – multifaceted system, the structure of management technology on the results of the process of technological education and the mechanism for coordinating the activities of the entities that make up the processes of technological education are explained from a scientific point of view.

Keywords: Technological education process, innovation process, innovation, STEAM approach, technological map, systematic approach, integrated system, management technology structure, mechanism for coordinating the activities of subjects.

1. INTRODUCTION

The fact that in today's educational environment there is not enough emphasis on improving the technologies for organizing and managing technological education in general secondary educational institutions on an innovative basis suggests that there is currently a need for this research work.

Innovations in the field of science in the educational system, the mechanisms of the resources that make up technological educational processes and the activities of their management, as well as the emergence of high- technological innovations, the growing flow of labor is generating a fourth technological revolution in all aspects of life. The interests of the individual and the demands of society are changing. In particular, the improvement of the attitude towards and the intensive implementation of the integrative approach of education and the STEAM approach of education in scientific and methodological directions with the concepts of technical development brought an important turn in science and technology, education.

The purpose of such approaches is to promote scientific literacy, training of competitive personnel by engaging the school, the public in ensuring the rapid progress of the entire world community and the sustainable development of the economy by providing education. Previously, in labor classes, girls studied simple sewing and weaving, simple sewing of clothes (apron) and food technologies, while boys learned wood and metalworking, painting and drawing in fine arts and drawing classes, hand drawing with a pencil, so now this has not been enough.

Main part. Today, schoolchildren around the world are interested in mechatronics, robotics, modeling, constructivism, programming, 3D-design and many other innovations. The following regulatory documents on the development of this sphere, further improvement of educational processes are reflected in the following regulatory documents /1,2/.

Also, the need for the formation of innovation in students and their development of creativity skills in relation to labor and professional activities is increasing. The role of "technology" in the content of education aimed at the formation of innovative skills and the formation of qualifications in students is

considered high. Technology serves students to work independently, think freely, develop creative search and improve the effectiveness of the educational process. In the lessons of technology, the issues of formation of universal and Universal competencies and innovative abilities for students, the correct organization of technological educational processes and the development of skills for its application to practice provide a solution at the current level of the problem /3,4/.

Therefore, this article aims to study from a socio-pedagogical point of view the improvement of the activities of the organization and management of technological educational processes in general secondary education schools. The organization and management of technological educational processes implies the implementation of a number of tasks, namely the creation of necessary and sufficient conditions for the participants of this process, the organization, coordination, control, analysis and objective assessment of their activities, as well as the selection of tools that serve to ensure the effectiveness of this process, the preparation of scientific and methodological products, therefore, the correct introduction of innovation technology in the process of organizing technological education leads to the fact that the teacher acts as the main organizer or consultant in this process.

The implementation of the algorithm and universal models of the processes of management activities of pedagogical workers in the preparation of educators as managers of the organization and management of pedagogical processes in the world, as well as the development of management strategies, mechanisms and innovation technologies, as well as the fact that teachers have not only pedagogical experience, but also such concepts as The main goal of global education is the upbringing of a harmonious generation, the need to approach the further development of the educational system in terms of the level of competence of the teacher's managerial activity in the course process. This makes it necessary to regularly raise the level of competence of the general secondary school teacher with even higher responsibility, independent work on himself and constant improvement of his qualifications. In particular, scientific research related to the organization of the process of technological education in schools of general secondary education and the improvement of management mechanisms is carried out in the world's leading scientific centers and institutions of higher education, including the Institute of education at the University of London (England), California and Ogaya universities (USA), Wollongog University (Australia), Tokyo Pedagogical University (Japan), Moscow State University. Currently, according to the content of the modernized state educational standard in the lessons of "technology" in general secondary education, it is envisaged that students will acquire a number of knowledge, skills and qualifications related to the science of "technology" /5,6/. According to him, students have a worldview about the organization of technological educational processes, a general idea of knowledge, skills and competencies of universal activities, about professions, have knowledge of the fields of national economy, production and service, have initial artistic processing skills in various materials, know national labor traditions, customs, focus on solving tasks related to the acquisition of skills

In the organization of technological educational processes on the basis of the above points, it will be an expedient work to improve the management activities of the teacher, that is, to study and analyze the issues of further development of the competency level of the teacher of technology /7/.

It is also impossible to imagine that today students provide the level of knowledge and the effectiveness of educational processes without methodologies of a systematic approach. All processes of educational significance, organized in general secondary education, should be studied as a holistic complex pedagogical system. That is, according to the interrelationship and direct dependence of the processes thought above, it is necessary to imagine them without a holistic system.

In the study of the effectiveness of educational processes, it is determined that the relationship between each process and the characteristics of interdependence and the influence of each component belong to a holistic system.

A number of scientists who have carried out pedagogical research in the direction of a systematic approach cite the peculiarities of this approach as follows:

- provides for the interaction of components, interacting parts and joints in the form of systemicity and integrity, as well as the implementation and development of its functional functions;
- in the pedagogical system, one of the main components is the goal, and methods and tools are necessary to achieve it. In achieving the goal, the movement of the system and its components determines the essence of the system function;
- the change in the pedagogical system will be due to internal conflicts;
- the descent and retransmission of information from the pedagogical system is the relationship of the components of the system with each other or with an entire system and with the external environment of the system;
- management aspects determine the difference between existing, demanded and planned perspective systems.

In the organization and management of pedagogical processes in technological education, an individual-activity approach is considered important in the processes of ensuring the activity of students and their motivation to perform tasks set according to specific goals.

In determining the solution to this problem, science requires the teacher to know the scientific and methodological foundations for improving the mechanism of the organization and management of technological educational processes. Therefore, in most cases, when organizing technological educational processes, special attention is paid to the teacher's ability to control the course process and the level of professional competence. At the same time, teachers are required to have the potential to know their subject, the formation of skills and the emergence of new knowledge in the process of generating skills and the ability, creativity and pedagogical skills to apply it to everyday activities. It has also been studied by a number of scientists that the lesson should be based on innovative approaches to the statement of the topic, have pedagogical and psychological qualities, as well as have a high level of competence in managing the activities of a group of students on the basis of modern requirements /8-10/.

Material and styles. As one of the important stages of the system of continuing education, the improvement of the mechanism of organization and management of educational and educational processes in general secondary educational institutions, including technological education processes, is carried out in accordance with the following principles:

- the obligation to comply with the requirements of state educational standards;
- the need to develop personal concepts and needs in students on the importance of the formation of systematic knowledge, skills and competencies on the basics of science;
- ensuring continuity and continuity in the organization and coordination of educational and educational processes;
- formation of a favorable educational environment for all based on the implementation of systematic, corporate, situational, reflexive, differentiated and innovative approach technologies in educational processes;
- the need of participants in educational and educational processes to act as subjects of this process, that is, the decision-making of subject-subject relations in educational processes;
- purposeful orientation, consistency and interdependence of the activities of the subjects of educational processes;

- the fact that the processes of education and upbringing are a complex of interconnected and related components;
- mutual unity of internal and external factors serving movement and development;
- it is taken into account that educational processes, as a holistic system, have the characteristics of interacting with the external environment and other systems.

The essence, importance, the need to follow these principles represent the strategic importance of the intended goal, which consists in the organization and coordination of technological educational processes. The overall goal of the implementation of these tasks is to represent each task as a system of strategic plans that are inextricably linked with each other in content-essence. The acquisition of system-specific features of the processes of implementation of the tasks set in the directions of achieving the common goal, technological education manifests itself in the need to organize the processes in a interconnected and related way.

In our opinion, the main principles of a systematic approach to the organization of classes in technology are as follows:

integrity (interrelationship, connectedness and interaction between all components);
 compliance (optimization of pedagogical processes through the successful implementation of goals and objectives that ensure the effectiveness of the subjects in the course of each stage);
 stability (presence of feedback in the process of interaction of subjects);
 optimality (organization of pedagogical processes according to a certain algorithm for managing the activities of subjects);
 foresight (ensuring the effectiveness of the pedagogical process through the effective management of the activities of the subjects).
 Thus, we came to the conclusion that the pedagogical process is a controlled system, therefore, the effectiveness of the organization and management of pedagogical processes implies the use of technologies of a systematic approach that serve to ensure the activity of subjects not only in the audience, but also in the processes of extracurricular activities and educational relations. Below, a complex – multifaceted system project of pedagogical processes has been recommended that the process of organizing technological educational processes is a pedagogical process, and that it is a managed system. (Figure 1.1).

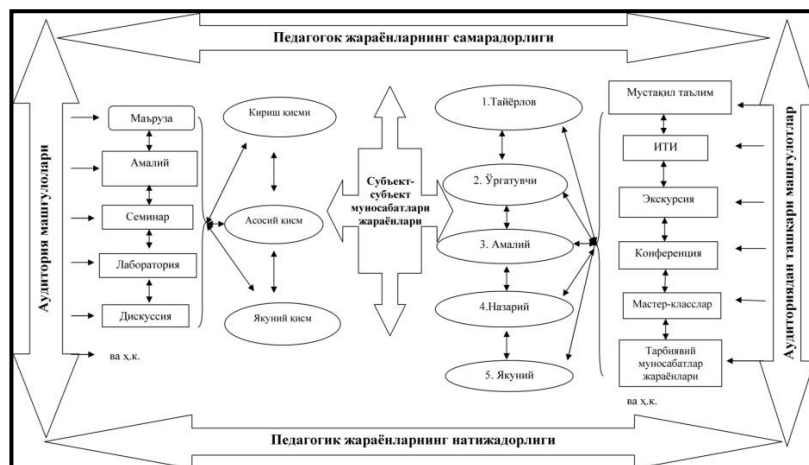


Figure 1.1. A project of pedagogical processes as a complex – multifaceted system.

Today, by ensuring the effectiveness of the activities of the subjects of educational processes, it occupies the earliest place in the system of alternative pedagogical processes, improving the quality of education. Therefore, one of the main tasks of the modern educator in the organizational and managerial direction is the alternation of pedagogical processes.

In our opinion, the algorithm for the alternation of pedagogical processes implies the organization of the activities of subjects in a certain order and with a clear consistency in order to achieve a high level of productivity. The results of qualification requirements and motivation, mastered by students in the implementation of management technology in terms of results, are indicators of the effectiveness of the activities of the subjects of educational processes.

2. RESULTS

Technological education on results the organization of processes and the improvement of management mechanism consists of the following stages. Below is the recommended structure of management technology of the results of the process of organizing technological educational processes (figure 1.2).



Figure 1.2. Structure of management technology on the results of the organization of technological educational processes.

From the above-recommended structure, it is possible to come to the following conclusion, to determine the goals and objectives of the problems for which the solution to the "planning" process should be identified, to implement the mechanisms and technologies for organizing and managing technological educational processes in the "organization" process, as well as from the formation of educational-motivational situations, to assess the effectiveness of, as long as it consists in improving the strategies (processes) for organizing and managing technological educational processes. Thus, in pedagogical processes organized on scientific grounds in the means of implementing management technology and ensuring feedback on results, the necessary conditions are created for improving their activities by the subjects of these processes. Debate. Improving the activities of subjects is a process that ensures the continuous and consistent development of the activities of the subjects of the pedagogical process and the improvement of the quality of education (figure 1.3).

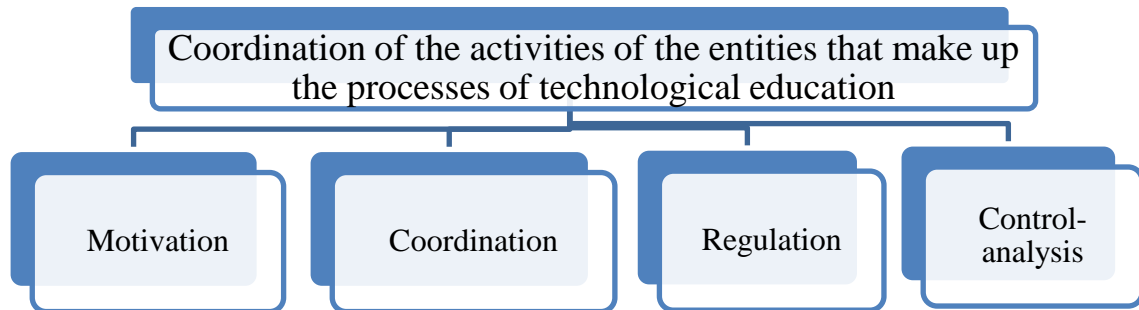


Figure 1.3. The mechanism of coordination of the activities of the entities that make up the processes of technological education.

Management mechanisms and the process of developing an algorithm for its implementation play an important role in ensuring the effectiveness of management technologies used in pedagogical processes. The need to ensure the effectiveness of the activities of subjects in the educational process requires the development of an excellent mechanism for determining the effectiveness of improving the organization and management mechanism of technological educational processes. One of the conditions for managing the educational process should be attentive to the pedagogical activities carried out by the teacher. It is necessary to regularly control which one of the students has what skills and to what extent his qualifications are. In each case, the content of education will consist of cases that are new to the student or have not been mastered by him. Previously mastered knowledge should serve as the basis for further mastering. After all, when dividing the content of education into its constituent parts, the teacher will first need to take into account the complexity of this skill not in terms of its implementation, but in terms of its assimilation. Therefore, each part allocated depending on the training of the student can cover the entire labor process in one case, the sequence of work in another, the only known method in another. It is not advisable to use realistic technological educational tasks in a number of cases so that students can quickly and thoroughly master new skills. Because, the newly studied assignment can seem very complex to the reader, even if he has previously mastered the opera that is part of him. In some cases, there may not be enough conditions to study specific labor activities. In such cases, labor activity can be replaced by other methods, that is, embroidery with the help of hands can be replaced by patterns that are sewn on the basis of design methods /11/. It is known that in any case, when the student does not understand the act he is studying, there will be neither quality nor effect in the work done if he does not know the essence of its content. The reader should be able to understand and visualize the essence of what he is doing. It is also darcor to know if the process carried out is correct or wrong. In particular, the level of awareness of the task by students plays a decisive role in completing tasks in which there are elements of creativity. It must be carried out the knowledge of the accumulated goal that the teacher must be able to deliver to the student. The reader practically assimilates this process. In this, he observes with his own eyes what is done with production, learns to measure and define. In all cases learns a certain production task. In technology classes, the types of knowledge by which the organization of technological educational processes is carried out are different, for example, visual - for its implementation, an action tool is used. In the verbal-action form, however, the problem condition is expressed using words. And to carry it out requires a certain effort. In the organization of technological educational processes, the form is considered to be an intermediate state in the last place. The solution is always tested with practice. At the stage of the types of education, the cooperation of the teacher and the student changes in different ways. Initially

learning, getting used to will be difficult and slow later the skill will be formed and accelerated. The study of each process is continuous and under systematic control. As skills are formed, productivity increases.

In the process of organizing and managing technological educational processes in general secondary schools, various innovative methods are widely used. The correct introduction of innovation technology in the educational process leads to the fact that the teacher acts as the main organizer or consultant in this process. In the preparation of educators as managers of the organization and management of pedagogical processes in the world, it is important to put into practice the algorithm and universal models of the processes of management activities of pedagogical employees, as well as the development of management strategies, mechanisms and innovation technologies.

Also, one of the priorities of higher pedagogical education is the training of competently thinking pedagogical personnel, capable of implementing modern management technologies to organize the activities of subjects of the educational process, mechanisms of a new algorithm for organizing and managing pedagogical processes in educational institutions, capable of developing and implementing innovative projects and models into practice. Promising areas of scientific and pedagogical research carried out in the field of development of managerial and organizational abilities of future teachers are aimed at organizing and managing pedagogical processes in educational institutions and finding a scientific solution to the issues of ensuring and coordinating its effectiveness. Because, in the future, it is necessary for future teachers to know the technological educational processes in the activities of the implementation of their functional tasks, the functions and methods of organizing and managing hususan pedagogical processes, as well as modern approach technologies.

Conclusion. From the above points, it can be summed up as follows: in general secondary education schools, the methods of organizing technology on an innovative basis were studied, recognizing that the features of communication and interdependence between processes in the development of technological educational processes and management activities are an integrated system, while students increase their level of knowledge and learning the effectiveness of the educational process.

Also, a project of pedagogical processes as a complex multifaceted system, a management technology structure on the results of technological educational processes and a mechanism for coordinating the activities of the entities that make up technological educational processes have been developed and explained.

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