# THE ROLE OF PEDAGOGICAL AND INFORMATION TECHNOLOGY IN THE IMPLEMENTATION OF INTERDISCIPLINARY, INTERDISCIPLINARY COMMUNICATION BETWEEN EDUCATIONAL DISCIPLINES

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## ABSTRACT

This article is dedicated to the effective use of pedagogical and information technologies, as well as problematic technologies and electronic information technologies in the interdisciplinary and interdisciplinary communication between academic disciplines.

Keywords: Problem state, integration, electronic resource, information, activation.

## INTRODUCTION

The educational system that determines the development and orientation of any society in the world community is a powerful force in changing cultures, minds and beliefs, and independent positions. These changes, first of all, are influenced by modern and advanced educational technologies and are characterized by an increased need for knowledge in every field of human activity. In many foreign countries, including the United States, Canada, Germany, Russia, Japan, Korea and other countries, the educational process is being implemented on the basis of new pedagogical technologies and programmed learning.

The country has undergone significant reforms in the education system as well as in all areas. Special attention is paid to the development of measures for the wider use of modern technologies and teaching methods in the educational process of educational institutions of the Republic.

Material and methods. The idea of full control of the educational process, which emerged in the 1970s in pedagogy, showed that didactic problems can be solved in pedagogical practice by managing specific learning outcomes and results-oriented learning.

In our view, the transfer of encyclopedic knowledge in the educational process is becoming less important. Human activities have changed fundamentally, they have to manage technology and be prepared to achieve their common goals.

The modern man is forced to focus his energies on the acquisition of new knowledge, skills and skills, but on getting rid of obsolete and defective knowledge.

Results and discussion. However, paradoxically, it is necessary to create a learning-oriented and well-designed learning process in a real-world environment in which teachers and learners must understand and be prepared for the changing times. Thus, there was a need to technologicalize the educational process. We will first look at the concept of technology. "Technology" is derived from the Greek word "teche", which means skill, art and "logos" - the word, doctrine.

Technology refers to a process that results in a qualitative change in the subject as a result of the subject's influence on the subject. Technology always envisages the use of the necessary tools and facilities to perform targeted object-specific sequences. In the context of accelerated scientific and technological development, the pedagogical technology that emerged in the sharing of "Pedagogics" and "Technology" became an independent discipline. Each independent discipline, in its essence, has its own principles that form its theoretical foundations, and relies on the principles of pedagogical technology, the set of rules that form the basis of "Pedagogy" and "Technology". According to the analysis of goals, objectives, structure and content of pedagogical technology the following basic principles are formed: scientific, design, systematic, purposeful, functional approach, controllability, correctiveness, efficiency, reproducibility, efficiency. All these principles are interconnected, complementary, and complementary. It is based on these principles that the learning process is organized, that is, its preparation and teaching process.

The principles of pedagogical technology include the achievements of pedagogical and technological sciences. This set of principles in the subject of "Pedagogical Technology" provides excellent results in the training of highly qualified personnel due to its accuracy, accuracy and no proof.

According to international experience, the use of information technology in the educational process is a good result, because today is the age of information society.

The e-learning resources that are currently being developed include: e-textbooks, e-learning materials, e-books, educational films, multimedia resources. performing integrative tasks; implementation of automated control; Students will also have the skills to work with a glossary of terms and concepts, as well as with the use of electronic information resources.

One of the major challenges that the education system faces today is the achievement of good quality education through interdisciplinary and interdisciplinary links between academic disciplines. Effective use of pedagogical and information education technologies is important.

Integration of knowledge bases in various fields will contribute to the social justification of changes in science, education, technology, technology, manufacturing and economics.

Pedagogical knowledge is a system that enables all types of activities carried out by a subject. It is an integral part of organizational, economic, social and economic activities, and provides the basis for the manifestation of pedagogical features in all spheres of the material and spiritual life of the society.

In turn, technical knowledge is able to cultivate such qualities as perseverance, careful planning, assessment of possible situations, and rational approach to the situation. In many respects this is due to the social and socio-pedagogical orientation of the subject, as well as the development of technology, which is increasingly integrated into society.

In addition to mathematics and natural, humanities, socio-economic sciences, there is a pedagogical knowledge based on technical knowledge.

In practice, the technological approach to the design and systemization of interdisciplinary knowledge is not sufficiently proven. This is partly due to the fact that a number of problems inherent in the methodology of engineering pedagogy are not solved positively.

Based on the aforementioned ideas, we will talk about the basics of integrating pedagogical and technical knowledge. Material integrity of the world, the laws of matter and the laws of its development have become a common factor recognized as an important basis for the integration of knowledge.

The foundations for the use and synthesis of knowledge are the methodological, gnoseological, ontological, and social foundations that represent the interdependence of disciplines.

The basis of the interconnectedness of the humanities, socio-economic and mathematicaltechnical disciplines is the process of reflection on the technical development of the human mind and the objective linkages between society.

One of the pedagogical technologies providing integration of knowledge, ensuring continuity of knowledge is "Problem technology".

The sequence of cognitive activities to create a problematic situation is as follows:

- problematic situation;
- looking for ways to solve the problem;
- problem solving.

Of course, in this process the learner needs to use all the acquired knowledge and systematize them.

Specifically:

• independently acquire the necessary knowledge, skillfully apply the acquired knowledge to solving various problems;

• competently working with information (knowing how to collect the facts necessary to study a particular issue, analyzing them, proposing hypotheses aimed at solving problems, identifying laws, identifying and solving new problems);

• To know exactly where and how this knowledge can be applied and to understand the scope of that knowledge;

• independent critical thinking, seeing the challenges in the real world and looking for optimal ways to address them;

• the ability to think creatively, to generate new ideas;

• Be able to work in different social groups, be able to work together, or get out of unusual situations;

• to work independently on their spiritual, intellectual and cultural potential.

Not only the content of education, but also the technology used in teaching plays an important role in the formation of a person with the aforementioned qualities. One of the ways in which the learning process can be transformed into reading and cognitive activities is the application of problem-based learning technology. This is because during the problem-solving process, both teachers and students are constantly testing their intellectual, physical, and spiritual abilities to solve educational and practical problems. The skills and skills acquired in this process will lead to the formation of the necessary qualities to live in the information society.

In integrating problem-based learning into the learning process, the teacher must distinguish between commonalities and differences between academic and academic problems. What they have in common is the fact that there are objective contradictions in both. The difference between academic and academic problems is that the problem with the scientific problem has not been solved yet, and the learning problem is solved, and the outcome and outcome are known. Only those paths and results should be searched by students. The ultimate goal of problem-based learning is to teach students to see and solve problems, which is only through the process of thinking, ensuring the continuity of the acquired knowledge, and activating knowledge on the topics covered.

E-learning resources will be aimed at expanding students' imagination, developing their initial knowledge and providing additional information. The opportunity to see, repeat, and reinterpret the topic through information technology education.

## CONCLUSIONS

In conclusion, the use of pedagogical and information technology to create interdisciplinary, interdisciplinary links between academic disciplines allows students to create extraordinary and unusual solutions, to develop individual and creative skills, to use scientific literature and information, to think critically, to move knowledge rapidly. create opportunities for adaptation to the conditions.

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