

Modern Teaching Aids and Technical Equipment in Modern Educational Institutions

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Abstract: This article discusses the global changes in society, the economy and the state that have taken place in recent years, which in turn have posed a number of problems for the education system. One of them is the renewal of forms and technologies and means of implementing the educational process.

Keywords: education, pedagogical law, teaching principles, traditional teaching aids, technical teaching aids, multimedia.

Education is one of the most significant subsystems of society, therefore its laws, like the laws of society, are not the result of the manifestation of some external force, they are the product of its internal self-organization. Pedagogical law is a category denoting objective, essential, necessary, general and consistently recurring connections between the phenomena of education, components of the pedagogical system, reflecting the mechanisms of its self-organization, development and functioning.

The principles of learning are the initial didactic provisions that reflect the flow of objective laws and patterns of the learning process and determine its focus on personal development.

The number and formulation of the teaching principles changed in the following decades. Work on them continues today.

The modern modernization of education is aimed at the priority of the human personality, the development of which should become the main value and the most important result of education. These new landmarks of the education system are manifested in various directions of its development: in building a system of lifelong education, student-centered learning, a competency-based approach, the emergence of new forms of alternative learning, the development of innovative approaches to the formation of the content of education, and the creation of a new information and educational environment.

All teaching principles are connected with each other and penetrate one another, so they can be represented as a system consisting of substantive and procedural (organizational and methodological) principles.

K.D.Ushinsky noted that “learning is work and should remain work, but work full of thought, so that the very interest of learning depends on serious thought, and not on some embellishments that do not go to business.”

The educational effect in education depends on the content of education, its versatility, humanitarian orientation and scientific character. The assimilation of educational material develops not only the cognitive sphere of the trainees, but also forms their personal properties, such as organization, independence, perseverance, diligence, efficiency, exactingness to themselves and others, discipline.

The principle of fundamental and applied orientation of education requires a thorough theoretical and practical training of students already in a general education school. In traditional didactics, it was formulated as a connection between learning and life, theory and practice.

Fundamentality in teaching implies scientific character, completeness and depth of knowledge. It is due to the nature of the modern scientific and technological revolution, which requires highly intellectual mobility, an exploratory mindset, a desire and ability to constantly replenish one's knowledge as changes occur in life and work.

The presence of many subjects, various types of teaching practices makes it necessary to build them depending on the degree of complexity. Therefore, the learning process must be carried out strictly sequentially, in compliance with the rule to go "from ignorance to knowledge, from inability to ability." Ya. A. Comenius figuratively wrote about this: "Nature does not make leaps, but moves forward gradually ... So the one who builds the house moves forward. He starts not from the roof and not from the walls, but from the foundation. , does not cover it with a roof, but erects walls. In a word, as in nature everything is linked one with another, so in training it is necessary to connect everything one with another in this way, and not otherwise ...".

Modern education requires a change in approaches to learning. First of all, it is necessary to achieve maximum activation and visualization of training. Modern youth masters all new forms of communication, using the latest technologies. The window to the world of knowledge must acquire new functions. This is facilitated by the use of various technical means to reduce the time of presenting the necessary information and modern technologies in education that facilitate the presentation of material. Today, the most significant changes are taking place in the information field. Traditional technical teaching aids are focused on the passive, contemplative nature of the assimilation of information. In this regard, the basis of the system of teaching aids in modern colleges should be multimedia teaching aids of a new generation, combining all the advantages of modern computer technologies that bring the learning process to a qualitatively new level, and correspond to the way of perceiving information that distinguishes the new generation of schoolchildren. who grew up on TV, computers and mobile phones and who has a much higher need for information and makes the most of the benefits of modern information, communication and educational technologies.

The use of multimedia in education today is already quite successful and has the following areas: video encyclopedias; interactive guides; simulators; electronic lecture halls; personal intellectual guides in various scientific disciplines; student self-testing systems; learning foreign languages, etc. When using multimedia, new teaching methods, new pedagogy, new tools appear. This enriches the educational process with new forms, methods and techniques of work, which make it possible to intensify the cognitive activity of students.

The objects of media education integrated into school disciplines are:

- educational information on a particular discipline;
- information transmitted through various communication channels;
- Technical means of creation, transformation, accumulation, transfer and use of information.

Working on multimedia projects, students gain experience in using modern technical means, on the one hand, on the other hand, they acquire the skills of individual and team work. Visual materials and educational resources on any subject and on any topic can now be found in great abundance. So, when lecturing, it is advisable to use a projector that allows you to display everything that happens on the computer screen on a large screen. Thus, teachers can give lectures without drawing with chalk on the blackboard and noticeably speed up the presentation of the material.

Also, teachers can use documents, diagrams and drawings previously prepared in the Microsoft Word word processor. For effective work in modern colleges, it is advisable to install not individual computers or hardware, but entire complexes, which include a set of hardware and equipment, appropriate software designed for use by a teacher. This will allow for a more effective process of teaching and control by the teacher.

Modern teaching aids in training are:

- traditional teaching aids (on printed and non-printed bases, as well as equipment, devices and tools for conducting field experiments and practical activities);
- innovative teaching aids (functioning on the basis of digital technologies);
- computer and subject complexes (including workplaces of a teacher and a student);
- educational equipment in the nomenclature (printer, scanner, projector, etc.), expanding the range and effectiveness of the use of computer technology;
- software and methodological complexes (computer training programs) for each academic discipline;
- network and telecommunications equipment;
- specialized furniture for classrooms;
- screen-sound teaching aids, incl. the latest achievement of new technologies - an interactive whiteboard;
- laboratory equipment;
- Educational devices and tools, etc.

In pedagogical science, the concept of "learning tools" still does not have an unambiguous interpretation. Many researchers use different definitions, sometimes contradicting each other, while the importance of teaching aids in the educational process is noted by many scientists. In connection with the advent of personal computers, teaching aids have also changed significantly, which significantly changed their function in the pedagogical system and made it possible to achieve a new pedagogical effect.

Modern teaching aids perform the following functions:

1. Information - are a source of information.
2. Didactic - in an accessible form they contribute to the transfer of educational information, the formation of skills and abilities.
3. Motivational - contribute to the activation of educational and cognitive activity of students.
4. Control - allow you to optimize pedagogical diagnostics

The use of interactive teaching aids in the educational process allows students to show independence when studying new material, in working with a text that reveals the main content of the subject, to assess the level of their preparation on a specific problem at a given time. The informativeness and colorfulness of the presented visual material have a positive effect on the emotional state of students, facilitate perception and create an additional incentive to study the subject.

To achieve good educational results that meet the new demands of society, it is necessary to use modern teaching aids in educational institutions.

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