EMJ MS
EUROPEAN MULTIDISCIPLINARY JOURNAL OF MODERN SCIENCE
https://emjms.academicjournal.io/index.php/ Volume:5

On the Basis of Modern Didactic Means (On the Example of Thermodynamics)

Komilova Nodira Abdurahmon qizi
ToshDTU Almalik branches

Tursunova Fayoza Zaripovna
4th year student of QarMII

Abstract: This article discusses the solution of the issues of a competent approach to the learning process in lectures, laboratory and practical classes. On the basis of a competent approach, recognition of the existing world is carried out, allows for a holistic understanding of the world, systemic the formation of modern knowledge, the development of interest in the educational process and increases creative thinking, as well as creates conditions for independent learning.

Keywords: professional competence, learning technology, information media, didactic methods, didactic tools, educational technology.

In creating the conditions for the formation of professional competence, it is important to choose a real and significant problem for the student. Practice shows that competence is formed only on the basis of personal activity experience, so it is necessary to create an educational environment with the conditions that allow it to be formed. Here we are talking about the content of general vocational sciences and forms of organization of a specific educational process focused on the profession. The selection of fundamental educational objects and their inclusion in the general subject matter is therefore also important because they are perceived by students as individual images. The real educational object as an element of educational content includes: the source, the reasons for the origin of the object, the content and functional purpose; internal structure and external interconnection system. For example, in the laboratory work "Determination of the thermal conductivity of a horizontal pipe", students study the proposed model of the mechanism, draw a diagram of the structure of the design, its operation, and then calculate the amount of heat in the pipe during the movement of molecules. have an idea of the conductivity and the efficiency of the pipe.

The process of implementing a component approach will be clarified during the coverage of the topics of the subject "Thermodynamics and Thermal Engineering".

Topic: Thermal conductivity . Students are invited to solve practical problems using a textbook on thermal engineering, to interpret a real existing object on a given conditional picture, to analyze hazardous heat transfer materials, to create conditions for the transfer of heat in a given general condition. are given.

Questions to be discussed during the protection of the work performed may include: types of heat transfer processes, heat transfer ducts, types of thermal conductivity in pipes, strength and compactness of pipe structures.

Topic: Basic thermodynamic cycles . The session can be held in the form of a conference. To studentsbrief information is given about the types of isothermal processes, and on this

basis, simplified graphs of isothermal processes involving simple cycles are drawn and practical examples relating to them are given. Cyclefind ways to solve the problem of calculating the efficiency.

Topic: Basic knowledge of the subject " Heat Engineering" . Using previously acquired knowledge, textbooks, manuals and teaching materials on "Thermal Engineering", students fill in the table, systematize the training material according to the given algorithm. These allow you to master and consolidate knowledge on the proposed sections of all academic disciplines.

The concept of "teaching technology" was first introduced in 1970 at a UNESCO conference. It has been recognized as a driving force in modernizing the educational process. "How to read?" and was first described in a report entitled. According to him, "teaching technology" is described as a set of methods and means of communication that emerged as a result of the information revolution and are used in didactics. Some experts view teaching technology as a pedagogical science, while others see it as an intermediate state between science and practice. Representatives of the third group interpret teaching technology as an intermediate state between science and art, while members of the fourth group associate teaching with the design of the teaching process. Not all approaches can fully describe teaching technology, but rather represent application in a specific field.

Teaching technology is also described as an organizational and methodological activity of the teacher aimed at optimizing the learning process through technical and informational means. A number of scientific-methodical and popular-scientific sources have tried to determine the relationship of this concept with the "teaching methodology " . However, in many cases, the authors tried to pit them against each other . In our opinion, the main difference between them is that the methodology answers the question "how to achieve the desired result in reading?", And the technology raises the question "how to achieve the desired result?" looking for an answer. Teaching technology depends on the pedagogical skills of the teacher. Teaching technology is considered not as a pedagogical process, but as a specific tool for project, organization and implementation of pedagogical activities.

The following two types of independent work of students can be introduced in the teaching of UKT subjects on the basis of UZDV:

- independent work of students under the guidance of a teacher;
- Independent work of students on the basis of UZDV.

From a pedagogical point of view, students' independent work under the guidance of a teacher is **organized in two ways** : directly in the classroom and outside the classroom. Independent work of students in the classroom under the guidance of the teacher involves working with textbooks and primary sources, group assignments, individual analytical activities in the field. The main task of independent work of students is to develop in them the skills of working with scientific and methodological literature, independent search for information. This will allow them to develop their research and creative abilities.

Therefore, the study of UKT on the basis of UZDV should be aimed at solving the most important problem, ie improving the quality of training of specialists who meet the requirements of world standards.

Modern didactic tools of teaching in the study of UKT subjects can be used in the following types of educational activities:

- in the study and presentation of new theoretical materials;

- when conducting laboratory work;
- in consolidating, monitoring and reviewing the studied learning material;
- students' independent work in the independent work of students in their performance ;
- conducting open lessons, teleconferences, audio conferences, sample classes;
- in practical training.

The process of using UZDV in the study of UKT subjects is a completely new method of information-educational activity. The use of UZDV in the teaching of UKT subjects requires the following:

- creation and scientific-pedagogical substantiation of technologies for the use of UZDV in the educational process;
- Development and practical application of pedagogical software necessary for the study of UKT subjects;
- change the traditional teaching methods through the use of UZDV in the teaching process;
- providing fast feedback between the user and the new ICT;
- input and widespread use of educational information on the laws of objects, processes and events in computer memory;
- archiving large amounts of information, transmitting it and accessing the user's database;
- automation of the processes of calculation, information retrieval, as well as the processing of the results of educational experiments and the formation of pedagogical goals for the use of UZDV in the teaching process;
- development of the learner's personality (thinking, aesthetic taste, communication skills, information culture, research and design skills, creative activity, etc.);
- acceleration of the educational process (increasing the effectiveness and quality of teaching, activating and stimulating knowledge, creating playful situations, choosing the order of educational activities, etc.);
- deepening interdisciplinary links in teaching.

In order to use UZDV in the teaching of UKT subjects, first of all, it is necessary to solve the following tasks: to provide information about the content of UKT subjects and the possibilities of UZDV in their study; To prepare students for the use of UZDV in teaching UKT subjects; Study and analysis of computer programs created in UKT sciences; Determining the areas of education in which UZTVs are used in the teaching of UKT subjects; Selection of hardware and software tools for creating UZDV; Development of a set of normative documents on the use of UZDV in the teaching of UKT subjects; Gradual provision of educational institutions with UZTVs on teaching UKT subjects.

The use of the didactic potential of UZVD in the teaching of UKT subjects will accelerate the educational process, as well as create the basis for the development of students' mental abilities, activation of cognitive activity, the creation of methods of independent acquisition of knowledge. These types of didactic opportunities include:

- Establishment of interactive communication between UZDV and students in the teaching of UKT subjects (this is the nature of interactive communication, in which the system responds to every request of the user, and, conversely, the system "replication" from the

user lum requires work to be done);

- computer display of educational information about the object, process under study (objects, their components or models; clear display on the screen of the model of the process or their models, including the part that is not directly visible in the real world; graphical interpretation of the studied law);
- Computer modeling of the studied objects and their interactions, events and processes occurring in real or virtual conditions;
- Explain the presented educational material with the help of images;
- providing information based on hypermedia;
- archiving and storage of large amounts of information;
- automation of the process of computing, information retrieval;
- Repetition of experiments or their elements in the learning process, processing of experimental results.

That's it thus, above reviews based on emphasize possible training _ teaching sciences i during learners ' mental abilities development, activation of cognitive activity, independent acquisition of knowledge for teaching in the process i nterfaol communication in if didactic opportunities are used appropriate will be. Thus, we believe that the conduct of general vocational training based on modern didactic tools will increase the interest of students in science, and at the same time will create the basis for their better mastery of science.

List of used literature

1. Nuriddinov. B. Scientific and pedagogical bases of application of active educational elements in professional development of teachers of professional education: Author's ref. dis. ... pfn-T .: 2002.-19 p.
2. Khidirov O.D. Scientific and methodological bases of formation of professional skills and abilities in the process of industrial education of students: Dis. ... pfn. -T .: 2003. -161 p.
3. Hamidov JA Methodological basis for the use of information technology in the process of training teachers of labor and vocational education. / Monograph Y /. - Tashkent, 2006. - 140 p.
4. Hasanboyeva O., Hasanboyev J., Hamidov H. History of pedagogy. –T .: “Teacher” publishing house, 1997, 246 p.
5. Yuldasheva JR, Usmanova SA Introduction of modern pedagogical technologies in practice. - T: Science and Technology Publishing House. 2008. Page 132
6. Yuldashev J., Yuldasheva F., Yuldasheva G. Interactive talim quality warranty . –T .: 2008 y. 153 b
7. Usmanovich, S. A., Ikhtiyorovich, N. N., & Abdurashidovich, U. A. (2022). Processing of Layout Tails of Gold-Extracting Plants. *CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES*, *3*(1), 7-13.
8. Носиров, Н. И., Косимова, М. Н., &Носирова, М. Х. (2021). Извлечение Ценных Компонентов Флотационным И Магнитным Методами Из Хвостов Золотоизвлекательных Фабрик. *CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES*, *2*(4), 212-220.