REPUBLIC OF UZBEKISTAN MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION

NAMANGAN STATE UNIVERSITY

METHODOLOGY OF TEACHING SPECIAL SUBJECTS

STUDY - METHODOLOGY

COMPLEX

Namangan – 2023

The educational methodological complex of 2023 was developed on the basis of the scientific program developed and approved by Namangan State University of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan.

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INTRODUCTION

Formation of a new generation of pedagogues for higher education institutions is among the important activities implemented in the social direction of the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan". The tasks of raising a morally and morally mature, independent worldview, creative thinker, rich national heritage, as well as a well-rounded person loyal to universal and national values are also defined.

In the Resolution of the President of the Republic of Uzbekistan dated April 20, 2017 "On measures to further develop the higher education system" and the need for further improvement based on the wide introduction of teaching methods, the qualitative renewal of the master's scientific-educational process and the introduction of modern organizational forms**.**

In such conditions, socially significant knowledge and values have the ability to fully meet the demands of the reforms implemented in the society, are resistant to the competition in the production sector, can adapt to sudden changes, and are able to function effectively at the level of the requirements for the qualifications of specialists in the labor market. should be directed to the formation of a specialist.

The main tasks of master's education are to prepare a reserve of mature pedagogic personnel for various sectors of the national economy and higher education institutions. The subject "Methodology of teaching special subjects" in the curriculum plays an important role in solving this task.

Professional-pedagogical development of graduate students of higher education institutions is the deepening and enrichment of their independent thinking, creativity, activity, relationships, character and worldviews.

It is characterized by situations such as stagnation and the formation of self-education needs, social and personal interests having a professional-pedagogical direction. For a future specialist, the process of master's education is also a period of self-improvement and development of qualities, knowledge, skills and abilities that are considered professionally important for the successful implementation of scientific and pedagogical activities.

In this period of the formation of the teacher's personality, the process of gathering, storing, transferring knowledge, creating their logical structure, and effectively applying them in the organization of professional-pedagogical activities in the future was carried out in continuous development. The view, values and motivations related to pedagogical-psychological activity essentially change and improve. At the same time, master's students acquire the qualifications to implement the educational process in higher education institutions.

Active and effective methods and forms are used in the preparation of graduate students for scientific and pedagogical activities. They should be able to easily transfer the knowledge, skills and qualifications acquired in higher educational institutions to the conditions of the educational institution, quickly master the educational process, and conduct educational work based on the requirements of the times.

In this study guide, the authors present the aims and objectives of the teaching methodology of special subjects, educational principles, teaching materials on the methodology of organization and conduct of lectures, experiments and practical training in special subjects. reflected. Also, in the manual, they tried to provide materials related to the control and assessment of students' knowledge, skills and qualifications, as well as the analysis of the lesson and the methodology of its conduct.

This training manual is one of the steps in this field, and we believe that the opinions and comments about its structure and content will help to improve it further in the future.

1. CONTENT, SUBJECT AND PURPOSE OF THE SCIENCE OF TEACHING METHODOLOGY OF SPECIAL SUBJECTS

Key words and phrases: Law "On Education", National Program of Personnel Training, individual, state and society, continuous education, science, production, higher education system, purpose of science and tasks, education, knowledge, skill, qualification, didactics, methodology, method, professional pedagogy, teaching methodology, profession, skill, research methods, observation method, interview method, pedagogical inquiry method, test, question questionnaires, statistical data analysis method, social research method, biomechanical methods, psychophysiological methods.

1.1. Law of the Republic of Uzbekistan "On Education" and Requirements for higher education in the "National Personnel Training Program".

The purpose of the Law of the Republic of Uzbekistan "On Education" is to determine the legal basis of education, upbringing, and vocational training of citizens and to ensure the constitutional right of everyone to receive education.

Law "On Education", "National Program of Personnel Training", state today's requirements for education of the young generation are reflected in regulatory documents such as educational standards and curriculum. In these documents, the primary task is to educate a well-educated, free-thinking, well-rounded person who embodies high human qualities. The main components of the national model of personnel training are:

- person - the main subject and object of the personnel training system, consumer of services in the field of education and their implementer;
- the state and society are the guarantors of personnel training and their acceptance, which regulate and control the activities of the education and personnel training system;
- continuous education is the basis of qualified competitive personnel training and includes all types of education, state education standards,

the structure of the personnel training system and its operating environment;

- science - prepares highly qualified specialists and uses them, develops advanced pedagogical and information technologies;
- production - the main customer who determines the need for personnel, as well as the requirements for the quality and level of their training, a participant in the process of providing the personnel training system in terms of finance and material and technical aspects.

The continuous education system is provided on the basis of state education standards, on the basis of consistency of educational programs at different levels and includes the following types of education: preschool education; general secondary education; secondary special, vocational education; higher education; post-secondary education; improvement of staff qualifications and their retraining; extracurricular education.

1.2. Higher education system

The fact that the Republic of Uzbekistan achieved state independence and chose its own path of economic and social development made it necessary to reorganize the structure and content of personnel training. The introduction of the Law "On Education" required the development and implementation of new curricula, programs, textbooks and modern didactic support.

From this point of view, the reform of the educational process and content in the "National Program of Personnel Training" is mainly based on the complex of normative documents (state educational standards, curricula and programs), and the provision of education and training to personnel is a national independence. It is emphasized that it will be carried out in accordance with the ideas

Continuing education is the basis of the personnel training system and a priority area that ensures the social development of the Republic of Uzbekistan and meets the economic, social, scientific-technical and cultural needs of the individual, society and the state.

Training and retraining of pedagogues for the continuing education system is a priority.

Continuity of education means that a person has the opportunity to receive education from birth to the end of his life.

Such a system is reflected in the Law "On Education" of the Republic of Uzbekistan.

Higher education is an independent type of continuous education system that prepares highly qualified specialists. It is implemented in higher education institutions. Higher education provides training of highly qualified specialists.

Training of highly educated specialists is carried out in higher educational institutions (universities, academies, institutes and other

educational institutions of higher education) on the basis of secondary vocational education.

Higher education has two stages: bachelor's degree and master's degree, which are evidenced by documents on higher education of the state-approved model.

Baccalaureate - basic higher education, which provides fundamental knowledge in one of the directions of higher education on the basis of secondary-special vocational education, the duration of study is not less than four years;

A master's degree is a higher education lasting at least two years on the basis of a bachelor's degree in a specific specialty.

Bachelor's degree, master's degree are academic degrees awarded to persons who have successfully mastered the programs in accordance with the relevant stage of higher education.

Citizens have the right to receive second and subsequent higher education on the basis of a contract.

Higher education is divided into bachelor's and master's degrees based on the basis of secondary special and professional education.

Admission of students to higher education institutions is carried out on the basis of state grants and fee-contractual basis. A bachelor's degree is a basic higher education that provides fundamental and practical knowledge in the field of specialization and lasts at least four years. After the completion of the bachelor's program, the graduates are awarded the "bachelor" degree by profession according to the results of the state certification, and by the statea diploma of an approved model, which gives the right to engage in professional activities, will be handed over.

A master's degree is a higher education that provides fundamental and practical knowledge in a specific specialty and lasts at least two years on the basis of a bachelor's degree. The state certificate of qualification

awarding the degree of "Master" is the final stage of the master's program. Masters are awarded a state-approved diploma that gives them the right to engage in professional activities.

In order to establish and develop a two-level higher education system, it is necessary to implement the following:

- development and implementation of state education standards for bachelor's and master's degrees;

- training of professors and teachers for higher education institutions, including training in leading educational and scientific centers in foreign countries;

- carrying out structural changes in higher education institutions;

- improving the management of higher education institutions, strengthening the independence of these institutions, introducing public management in the form of founders, boards of trustees, public control boards;

- development and implementation of effective mechanisms of integration of education with science and production;

- individualization of study, independent learning and development and mastering of distance education system technologies and tools;

- acceleration of student education using pedagogical and information technologies, modular system of training;

- to ensure the humanitarian direction of education based on the rich spiritual and intellectual heritage of the nation and universal values.

1.3. Methodology of teaching special subjects as a pedagogical science. The subject, goals and tasks of the subject of teaching methodology of special subjects.

Today, the subject "Methodology of teaching special subjects" is considered an elective subject in master's majors, and the curriculum of the subject is developed by the professor-teachers who are responsible for teaching this subject in each higher education institution.

When creating a curriculum for the subject "Methodology of teaching special subjects", taking into account the following goals and tasks will increase the perfection of the program (Fig. 1.1).

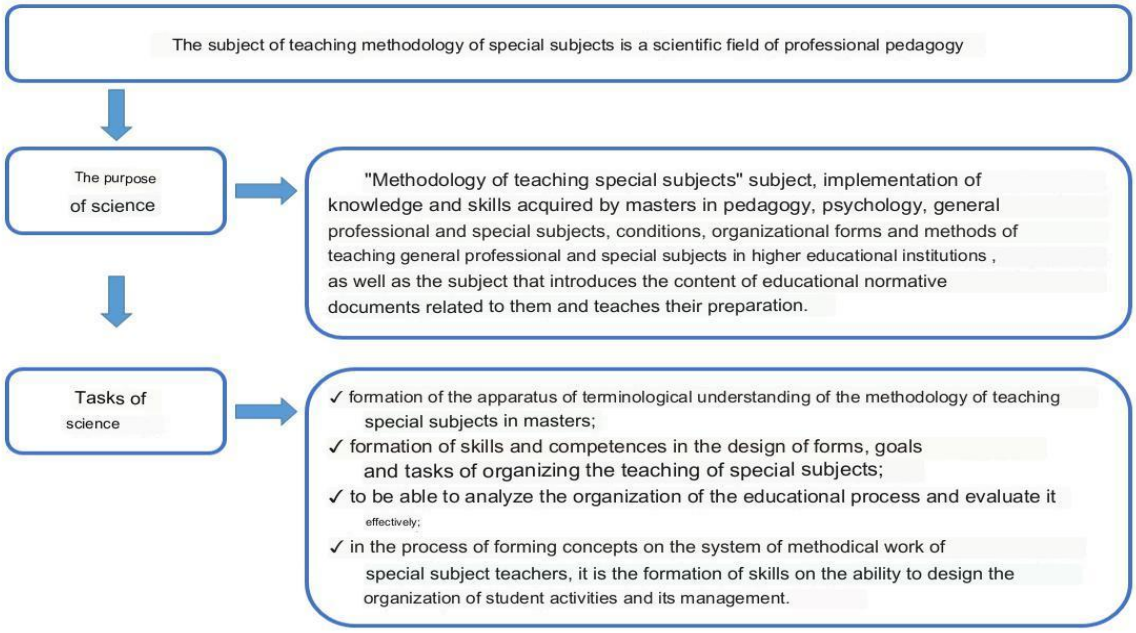

Figure 1.1. The purpose and tasks of the teaching methodology of special subjects.

In the lecture classes of science, regulatory and legal documents of higher education, principles of education, organizational forms and implementation methods of teaching special subjects, conducting lectures, practical and experimental classes in special subjects topics such as methodology, monitoring and evaluation of skills and skills with students are included.

In the practical training, the following topics are allocated to science: the structure and content of higher education institutions, the structure of normative and legal documents of higher education and their formalization, educational methods and their implementation methodology, special the use of innovative educational technologies in the teaching of subjects, the method of conducting lectures on special subjects, practical and experimental training, the method of lesson analysis, and the formation of knowledge and skills.

1.4. Research methods of the teaching methodology of special subjects.

The purpose of conducting scientific research on the problems of teaching special subjects is to learn how to solve problems related to teaching and learning, the development and practical application of effective methods, and the use of information and technical tools. In order to conduct scientific research, a teacher must have a deep knowledge of the content of the subject. Many future pedagogues are engaged in pedagogical research during their student days. They prepare methodical instructions, models, and materials for independent work. They improve their pedagogical skills by participating in scientific conferences and seminars with their lectures.

The process of scientific pedagogical research can be conditionally divided into the following stages:

1. The teacher's identification of problems based on the study of literature and practical work.

During the study of literature, the teacher should determine the following:

- opinion of the author of the literature about the studied problem;
- proposals for a different approach to the studied problem;
- which main issues are not covered in the literature;
- research to solve the problem.

The following are the problems that arise in the teaching process:

- difficulties faced by the teacher during the lesson;
- causes of deficiencies and difficulties.

2. Step-by-step organization of training.

- based on the comparison of evidence, recommendations are made.

3. Formalization of research results and application in the educational process.

- general and special methods of scientific research are used in the teaching methodology of special subjects.

- general scientific methods include theoretical research, observation, interview, pedagogical survey, test, questionnaires, analysis of statistical data, etc.

The method of theoretical research is research conducted on the basis of learning and analysis of literature and pedagogical experiences. When working on literature, books and magazines, articles and patents, scientific works, collections and catalogs, information obtained from the Internet system are used. The observation method is usually used to determine the ways in which students learn subjects through natural observation, take into account changes in their behavior, and show appropriate educational effects. Experience is a certain aspect and perception of events with a goal in mind. It takes into account the speed and number of observations, the object of observation, the time, the description of pedagogical situations for observation, etc.

When studying the creativity of students, factors related to their unique individual activities are analyzed and conclusions are made.

Pedagogical inquiry method - the process of obtaining information from other people about some aspects of pedagogical experience or events is the basis of this method. The questioning method implies a logically thought-out system of questions, its specific use, and relatively few (3-5) questions. It is also possible to specify a definite answer ("yes", "no").

Tests, questionnaires-questionnaires, that is, the questionnaire method, are conducted in order to determine the novelty of a scientific hypothesis, to find out the opinions, views, interests of students, what professions they are interested in, future dreams, and to draw appropriate conclusions and recommendations.

The purpose of the test questions is to evaluate the knowledge of the students in a short time. One of the ways to determine the knowledge and worldview of specialists is the test. The test allows to immediately

determine and evaluate the knowledge, science, spirituality of a student or specialist, as well as the direction and specialization of young people. The advantages and disadvantages of knowledge assessment with the help of a test are presented from the pedagogical point of view, and it is noted that the evaluation process can be automated using EHM. The reason for the accuracy of the test questions and problems is their shortness and conciseness, the presence of the correct answer in the list of common answers. It serves as a guide for students, it is similar to a riddle game, and memory, intuition and ingenuity are used to find the answer. Printing test questions will further activate students' independent work.

Experiment-trial experiment method - this experiment is conducted in order to check and determine the practical processes of scientific hypothesis or practical work related to the educational process.

The method of statistical data analysis - in the field of education, including the constant growth of allocated funds, textbooks and training manuals, visual aids, teacher training, construction of educational institutions , economic contracts and funds coming from them are determined by the statistical method.

Mathematical and cybernetic methods - translation from one language to another with the help of the theory of teaching, computational mathematics and cybernetics in practice, programmatic education and its control by machine, strengthening of teaching, increasing the effectiveness of education through assessment, differentiated and such processes as individual education.

Social research method - questions are included in the questionnaire. The purpose of this is to find out students' interests in professions, friendships between students, conditions at the school, achievements and shortcomings, interest in religion, especially Sufism, students' spiritual qualities, enthusiasm for learning. , the level of availability of literature, educational distribution, the level of education of teachers, the quality of educational manuals, learning the types of training on the computer, the

type of training in improving scientific and professional skills, amount of scholarships, how much scholarships cover students, participation of students in paid work, support of their parents, their education, workplace, public places frequented by students, place of residence, influencing the formation of scientific outlook, specialist The decisive factors in the development of students, the level of consciousness of students, the spiritual qualities needed to become a perfect person, mastering questions about the level are included in the questionnaire. All the questions are processed on the computer and the results are issued. In addition to the above methods, special methods are also used in vocational training.

In vocational education, special methods of research are widespread, in which equipment and devices aimed at studying phenomena and processes are used in order to obtain objective quantitative values.

Special research methods are conditionally divided into three groups:

• Methods related to studying the details of the results of their actions (accurate execution of actions, time spent, productivity);

• Biomechanical methods;

• Psychophysiological methods.

Timing also plays a role in research related to the performance indicators, including in the process of their mastery. In order to determine the standard of work, acceptable time, including the time standard and order of students in different periods of production education, as well as the requirements for studying the temporal structure of actions, or assessing the level of training of workers, chromatography is used. Biomechanical methods are the study of spatio-temporal and force parameters of movement. In this, their level of perfection, the interaction of the worker with the tool, machine, etc., the kinematics of the tool and hand movement, etc. are determined. Psychological methods are used to study the functional state of various organs of the human body in the course of educational and work

activities. Of these, electromyography, electrocardiography, and electrodermography methods are widely used.

Control questions to strengthen the topic:

1. What are the requirements for higher education in the Law of the Republic of Uzbekistan "On Education" and "National Program of Personnel Training"?

2. What are the goals and objectives of the teaching methodology of special subjects?

3. Give an opinion about the main concepts of the teaching methodology of special subjects?

4. Explain the general methods of teaching special subjects?

5. Explain the special methods of teaching special subjects?

2. REGULATORY AND LEGAL DOCUMENTS OF HIGHER EDUCATION

Key words and phrases: State educational standard, qualification requirements, classification of specialties, curriculum, model and working curriculum, curriculum, model and working curriculum, plan of calendar topics.

2.1. State educational standard. Qualification requirements

In accordance with Article 7 of the Law of the Republic of Uzbekistan on "Education", the national initiative on the development of educational institutions is mandatory for the management of educational institutions, regardless of the form of ownership and ownership.

State educational standards of baccalaureate education and master's specialties are approved by the decisions of the Cabinet of Ministers of the Republic of Uzbekistan No. 343 of August 16, 2001 and No. 199 of July 10, 2013 "State educational standard of higher education. It is produced by the basic higher education institutions in strict compliance with the requirements of the Basic Rules. Determining the content of education in institutions of higher education and organizing the educational process based on it is based on the state educational standard, curriculum, curriculum, bank of methodical materials, that is, in textbooks or training manuals.(Fig. 2.1)

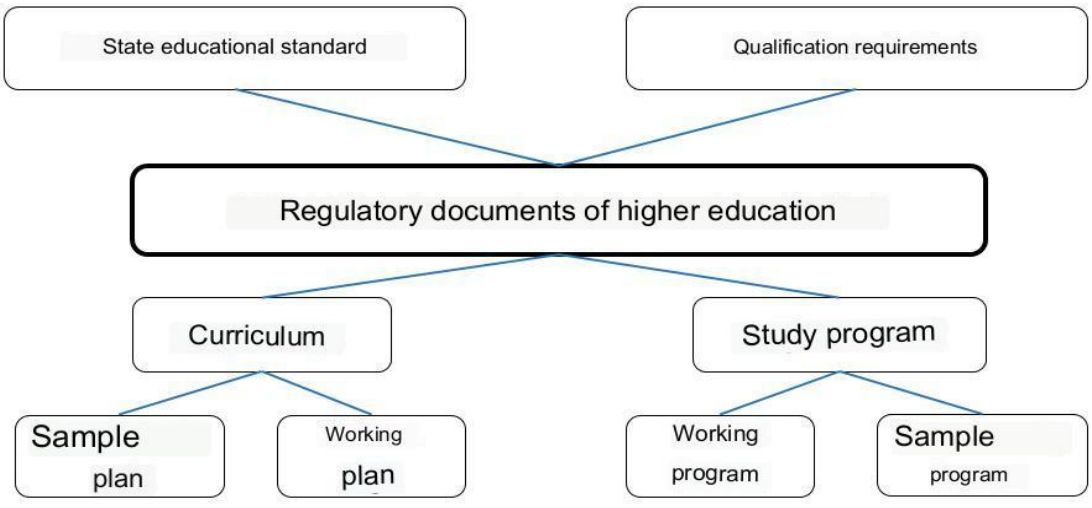

Figure 2.1. Regulatory and legal documents of higher education.

"External conclusion" of the technical committee on standardization of continuing education to the State Education Standards developed by higher education institutions, "Agreement" on agreement with similar higher education institutions and staff consumers protocol" and "Deed of Agreement", reviews received from network scientific research institutes of the Academy of Sciences, an extract from the protocol of the relevant educational and methodical association under the Coordinating Council, the conclusion of the State Test Center is attached.

The State Education Standard and curriculum are submitted to the Development Center of the Ministry of Higher and Secondary Special Education with an official letter signed by the rector of the base higher education institution. A list of educational fields and specialties adjusted to the current Classifier is attached to the letter.

The State Education Standard - determines the standards and requirements for the object of standardization and is approved in accordance with the Law of the Republic of Uzbekistan "On Standardization" and determines the following:

- requirements for the quality of personnel training and the content of education;
- the necessary and sufficient level of training of students and qualification requirements for graduates of educational institutions;
- the necessary size of the training load;
- determines the procedure and mechanism for evaluating the activity of educational institutions and the quality of personnel training.

The State Education Standard is the basis for the creation of other regulatory documents that regulate the educational process and the evaluation of the activities of educational institutions.

The introduction of state educational standards implies the following goals:

- ensuring the high quality of education and the training of personnel who meet the requirements of the deep economic and social reforms implemented in the country, the establishment of a developed democratic state;
- regulating the content of personnel training based on the prospects of social and economic development of the country, the needs of society, modern achievements of science, technology and technology;
- democratization, humanization and socialization of education, increasing the level of legal and economic knowledge of students, as well as the efficiency of the educational process;
- protection of the interests of the individual, society and the state in the field of providing quality educational services, education and personnel training;
- determining the criteria and procedure for evaluating the quality of personnel training and educational activities;
- ensuring the consistency and continuity of the educational process and personnel training, optimizing the educational process at all types and stages of education;
- ensuring competitiveness in the market of labor and educational services.
- determining acceptable requirements for the quality of education and personnel training, the nomenclature of provided educational services;
- a regulatory framework that defines the relevant requirements for education and its future results, the procedure and procedure for periodically assessing the level of knowledge and professional skills of learners, as well as control over the quality of educational activities;
- introduction of effective forms and methods of spiritual and moral education of students based on the rich intellectual heritage of the nation and universal human values;

- to coordinate the content of all types of education, education and upbringing and their interdependence, to ensure consistency in the continuous education system and personnel training;
- norms regarding the educational and educational process, editorial technologies of the continuous education system and information provision, control of the level of education, qualifications of students and their graduates in educational institutions and setting requirements;
- introduction of an impartial system of assessment of the quality of education and personnel training, attestation and accreditation of educational institutions;
- ensuring effective integration of education, science and production for purposeful and high-quality training of personnel;
- to ensure compliance of national standards with international requirements regarding the quality of education and personnel training.
- general secondary education, including primary education;
- secondary special, vocational education;
- higher education (bachelor's degree, master's degree).

Pre-school, pre-school, post-secondary education, professional qualification improvement and retraining are determined by the authorized representative of the state department.

State educational standards of higher education on the implementation of the laws of the Republic of Uzbekistan "On Education" and "On the National Program of Personnel Training" and on the training of highly qualified personnel with higher education, Ministers of the Republic of Uzbekistan in order to ensure the continuity and continuity of education, to join the world education system, as well as to improve the teaching-methodical and regulatory framework of higher education.

It was approved by the decision of the court No. 343 of August 16, 2001 "On approval of state educational standards of higher education".

State Education Standard is the relevant regulatory documents regulating the educational process, the activities of educational institutions, personnel, the quality assessment of the preparation of textbooks and training manuals (state educational standards of the fields of education, undergraduate education or It is the basis for creating qualification requirements, curricula, programs of academic subjects, etc., for fields and master's specialties.

The State Educational Standard is mandatory for all educational institutions located in the territory of the Republic of Uzbekistan, regardless of their departmental subordination and forms of ownership in the training of higher-educated personnel.

Amendments and additions may be made to the State Educational Standard during the implementation of the stages of the national personnel training program, as well as based on the prospects of the country's socio-economic development, society's needs, scientific, technical, technological and cultural achievements, and global trends in personnel training.

Higher education standards are divided into the following categories:

- Higher education standards approved by the Cabinet of Ministers of the Republic of Uzbekistan:
- State educational standard of higher education.
- Classifier of higher education courses and specialties.
- Higher education standards approved by the competent state body for higher education management - state education standards of educational fields.

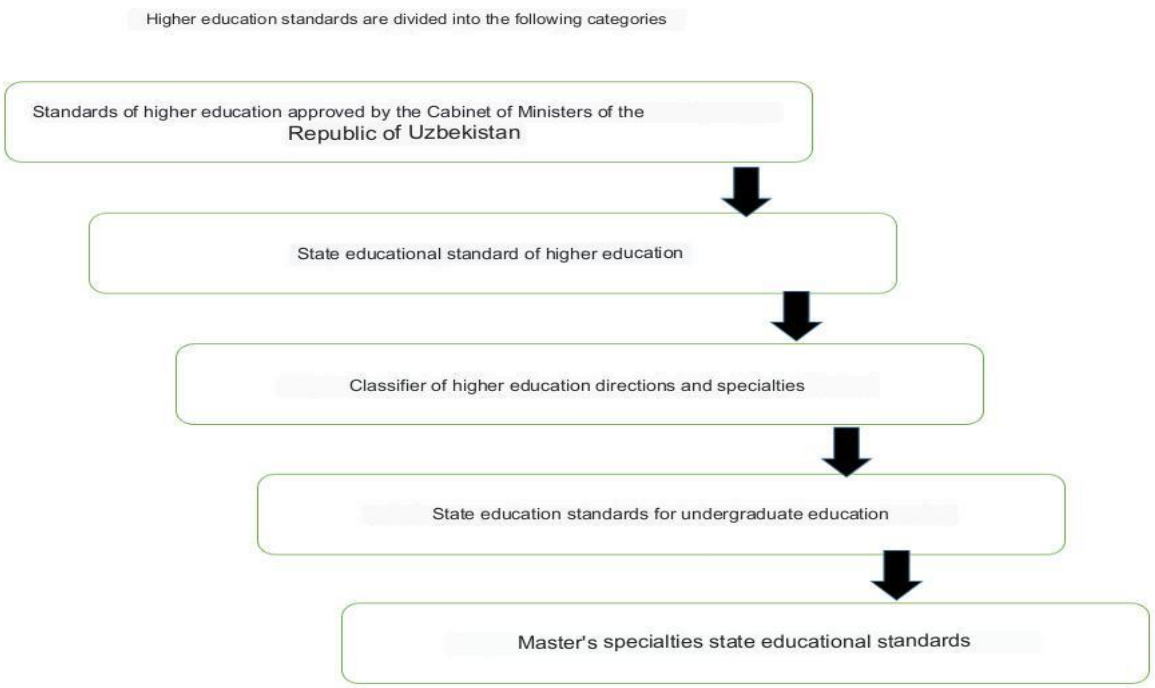

Figure 2.2. Categories of higher education standards.

The classification of higher education majors and specialties is a systematic list of undergraduate majors and master's majors for the training of highly educated personnel.

The classification of higher education bachelor's degrees and master's specialties is a component of the unified system of information coding and classification of the Republic of Uzbekistan. It was developed in accordance with the implementation of the 5-con decision of the Cabinet of Ministers of the Republic of Uzbekistan "On the development and introduction of state education standards for the continuing education system" dated January 5, 1998.

The classifier refers to the laws of the Republic of Uzbekistan "On Education" and "On the National Program of Personnel Training", the President of the Republic of Uzbekistan "On the State Program of Reforming the Health Care System in the Republic of Uzbekistan » Created according to Decree No. PF-2107 of November 10, 1998.

The classification was created based on the principles of the International Standard Classification of Education (ISTC) adopted by UNESCO in March 1997.

It includes the following areas of knowledge (Figure 2.3).

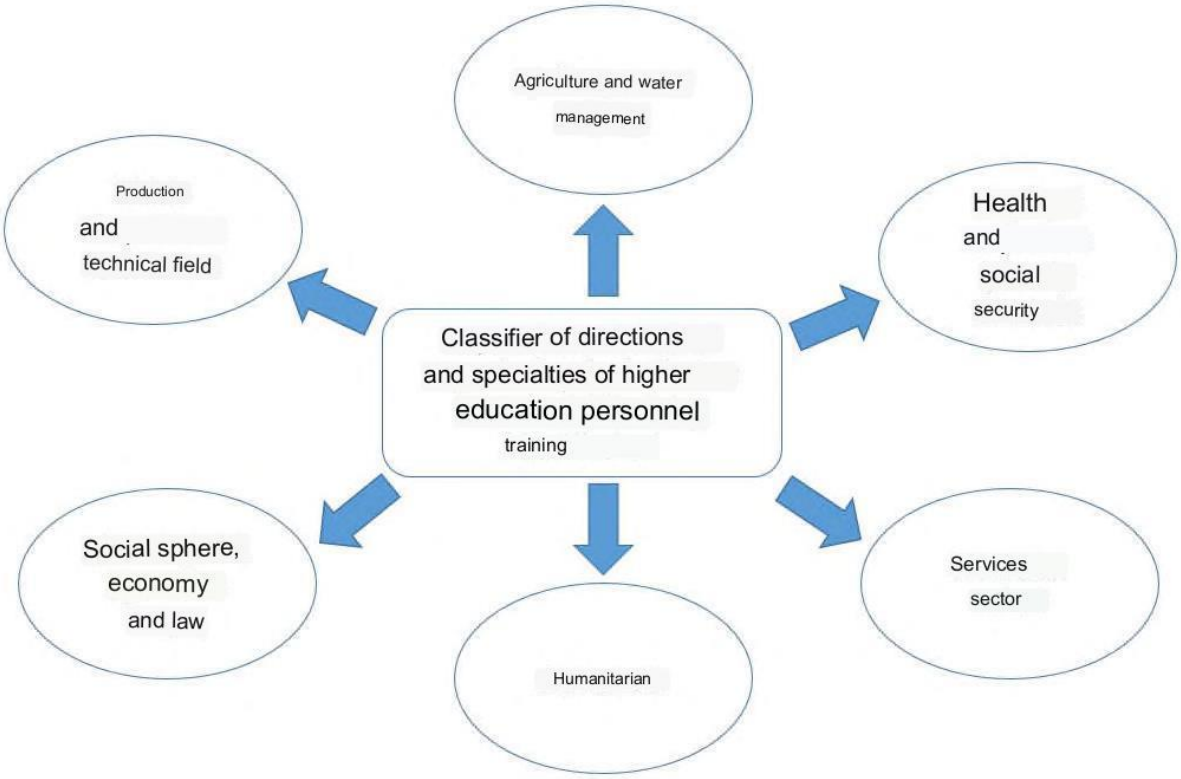

Figure 2.3. Classifier of directions and specialties of higher education personnel training.

According to the international standard classification of education, the stages of education are marked with the number 5 in undergraduate majors, and 5A (number and letter) in master's majors. For example: bachelors code 5140100, 5211300, 5520400 and others; Masters 5A140101, 5A211301, 5A520403 and others.

The procedure for making changes and additions to the classification of directions and specialties. Proposals for changes and additions to the classification of directions and specialties are submitted by higher education institutions to the Ministry of Higher and Secondary Special Education in agreement with the Cabinet of Ministers of the Republic of Uzbekistan on the initiative of personnel consumers. entered for decision making.

The following documents are attached to proposals for changes and additions to the classification of fields and specialties:

- substantiating the scientific and practical importance of the direction or specialty and the need for prospects for specialists in the labor market;

- qualification requirements, curriculum projects and other specific features of the bachelor's course or master's specialty;

- justification of the availability of scientific-pedagogical and material-technical support of a new direction or specialty.

The Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan conducts the standard of the classification of higher education courses and specialties. This classifier determines the names and codes of training courses, training of personnel in higher education institutions by professions and specialties.

The national classification of higher education training areas, professions and specialties was revised and improved, taking into account the demands and needs of the economic sectors in the preparation of specialists in the prospects of social and economic development of the republic.

Qualification requirements of the bachelor's degree of higher education - all higher education institutions in the territory of the Republic of Uzbekistan in the implementation of the training of bachelors with higher education in the field of education, assimilation of the curriculum and science programs represents a set of requirements for educational institutions.

When a higher education institution has the authority to train personnel in a certain bachelor's education field, it is considered to have the right to implement the curriculum and science programs based on the qualification requirements.

Key users of the qualification requirement:

- high-quality development of curriculum and science programs, taking into account the achievements of science, technology and social spheres in this field of education,

- professors of higher education institutions responsible for effective implementation and renewal;
- all employees and students of the field of education who effectively carry out educational activities on mastering the curriculum and science programs;
- management staff of higher education institutions (rectors, vice-rectors, heads of educational departments, deans and heads of departments) who respond to the level of training of graduates within their authority;
- State attestation commissions that evaluate the level of preparation of graduates;
- bodies providing financing of higher education institutions;
- competent State bodies that control the accreditation and quality of the higher education system;
- entrants and other interested parties who have the right to freely choose the field of education.

Types of professional activities of bachelors in a specific field of education:

- scientific research;
- organizational management;
- project research;
- production, technological;
- Pedagogical activity in general secondary, secondary special, vocational educational institutions;
- includes providing various services.

There may be additions and changes in the types of professional activities of bachelors based on the modern achievements of science, technology and technology in the field, as well as the requirements of personnel customers.

Qualification requirements for the field of study reflect the following:

- general classification of undergraduate education;

- field of application;
- classification of professional activities of bachelors according to the field of education;
- general requirements for the level of training of bachelors in the field of education;
- general requirements for the level of preparation of bachelors;
- qualification requirements for the professional activities of bachelors in the field of education;
- general requirements for the content of the curriculum and science programs of the educational field;
- general requirements for the content of the subject blocks of the curriculum of the educational field;
- requirements for professional practice;
- the size of the load in the curriculum of the educational field;
- validity period of qualification requirements.

Master's degree qualification requirements. Qualification requirements of higher education represent a set of requirements for all higher education institutions in the territory of the Republic of Uzbekistan in the preparation of masters in the field of magistracy, assimilation of the curriculum and science programs. When a higher education institution has the authority to train masters in the specialty of magistracy, it is considered to have the right to implement the curriculum and science programs prepared on the basis of the requirements of this qualification.

Key users of the qualification requirement:

- professors of higher education institutions responsible for the high-quality development, effective implementation and updating of curricula and science programs, taking into account the achievements of science, technology and social spheres in the master's specialties of this field of education teachers;
- all employees and students of the field of education who effectively carry out educational activities on mastering the curriculum and science programs of master's majors;

- management staff of higher education institutions (rectors, vice-rectors, heads of educational departments, deans and heads of departments) who respond to the level of training of graduates within their authority;
- State attestation commissions that evaluate the level of preparation of graduates;
- bodies providing financing of higher education institutions;
- competent State bodies that control the accreditation and quality of the higher education system;
- bachelors, parents and others who have the right to voluntarily choose one of the master's specialties of the field of education.

2.2. Curriculum and working curriculum.

Curriculum is the main document that plans the organization of the educational process in educational institutions.

Curriculum is an official pedagogy that determines the subjects taught in educational institutions, their departments, the order of teaching, and the teaching of each subject throughout the year, the number of them per academic year and per week. document. The curriculum in Uzbekistan is provided by the relevant ministry is confirmed. The curriculum is uniform and mandatory for educational institutions of one type. At the same time, each educational institution can change the curriculum by a specified amount. Curriculum The general and compulsory nature of the curriculum ensures the continuity of the stages of the educational system and the same opportunities for learning for all members of society.

Due to the fact that the education system in the Republic of Uzbekistan is aimed at forming a well-rounded person, special attention is paid to the humanization of education in the curriculum. The curriculum consists of certain parts, which take into account the scientific, spiritual, professional qualities and practical skills and qualifications that should be formed in a student, student or trainee of an educational institution. **Curriculum** is a normative document that determines the types of educational activities, academic subjects, courses, the consistency of their study and the number of hours in a specific direction or specialty of higher education.

The curriculum includes the following:

1. Code 5 of the field of preparation (specialization) and its name, duration of study, academic degree obtained after graduation.

2. Form of education.

3. Distribution of the study period (table).

4. Plan of the educational process.

5.1. Subjects to be studied.

5.2. The total amount of time allocated for studying each subject.

5.3. How much time is allocated for learning - theoretical, practical and experimental classes, seminars, course work and independent education.

5.4. How to study the subject in which course, semesters, how many hours per week.

6. State Certification.

7. List of elective subjects

8. Notes

When developing educational plans, it is necessary to take into account that the level of skills developed by future specialists corresponds to the amount of subjects studied and the period of study. It will be necessary to take into account the formation of knowledge and skills of the future specialists, the step-by-step in-depth study of each subject, convenient and important.

One of the most important issues in the development of the curriculum is to determine the subjects to be studied. Determining the content of teaching in higher education institutions is usually decided on the basis of practical experiences.

Determining the content of education is mainly based on the main task facing the higher education system - the task of training qualified competitive specialists capable of operating in the ever-growing conditions of production.

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General requirements for curricula of higher education courses and specialties:

Taking into account the continuity and integrity of curricula and programs of subjects at the bachelor's level with general secondary and secondary special, vocational education

should be developed and should provide for the student's mastery of the following blocks of compulsory subjects:

- humanitarian, socio-economic, mathematical and natural-scientific;

- general professional sciences;

- specialization sciences;

- additional subjects.

In accordance with the decisions of the Government of the Republic of Uzbekistan, certain higher education institutions or blocks of other subjects may be determined by educational directions and specialties.

In order to acquire the skills of professional activity, it is necessary to provide for the passing of qualification practices. Curricula must include compulsory subjects as well as subjects chosen by students. When mastering the curricula of the undergraduate education, it is necessary to provide for students' independent knowledge of a number of issues and problems related to academic subjects. Undergraduate courses must be completed with the final state certification in accordance with their curricula.

The contents of the curricula and subject programs of master's degrees are formed with the aim of imparting in-depth fundamental and practical knowledge of the specialty as the primary and initial stage of training highly qualified scientific and scientific-pedagogical personnel.

Curricula and subject programs of master's majors must be developed taking into account the continuity and consistency with the curricula and

subject programs of undergraduate education and provide for the acquisition of the following mandatory blocks by students:

- general methodological sciences;

- specialty subjects;

- scientific activity.

Curricula and subject programs should include compulsory subjects as well as subjects of students' choice. It is necessary to provide independent knowledge of several issues and problems of educational subjects in the mastering of curricula and programs of subjects. Master's degrees must be completed with the final state certification in accordance with their curricula.

Control questions to strengthen the topic:

1. Explain the concepts of bachelor and master?

2. Explain the State educational standard for higher education?

3. What do the qualification requirements of the field of study reflect?

4. What components does the curriculum consist of?

3. PRINCIPLES OF EDUCATION

Key words and phrases: Principles of education, the principle of activity, the principle of using examples, the principle of taking into account the age and individual characteristics of learners, the principle of connection between theory and practice in teaching, the principle of demonstrability, the principle consistency in teaching, the principle of awareness and activity of students in teaching, the principle of educational nature of teaching.

3.1. Understanding of the principles of education.

The principles of education are the nature and direction of the study and teaching process aimed at the realization of the goals and tasks of education, the acquisition of scientific knowledge by students, the basic laws and rules of the formation of relevant skills and qualifications. contains. At the same time, the principle of education includes two activities, that is, the activity of the learner and the learner. Accordingly, the principle of teaching is the main basis for correct theoretical and practical solutions to the most important issues of education.

The principles of education are the set of basic rules imposed by the teacher on the basis of the requirements of the curriculum and educational programs to impart knowledge, develop skills, and make them talented in one or another subject.

The great pedagogues I.A.Komensky, J.J.Rousseau, CH.R.Pestalotsi, V.Disterverg, K.D.Ushinsky and others based the principles of education (didactics) in their works. The system of educational principles represents the laws of the teaching process and is determined by the goals of education. Accordingly, the principle of teaching is the main basis for correct theoretical and practical solutions to the most important issues of education.

M.N.Skatkin defines the principles of education as follows: scientificity, comprehensiveness, relevance to life, differentiation, systematicity, interrelationship between academic subjects, relevance.

M.G. Ogorodnikov distinguished scientificity, idealism, historicity, systematicity, unity of theory and practice, connection of education with life as principles.

S. Ya. Batishev - believes that it is necessary to imagine the content of vocational education as integrally connected with the development of production and the labor process, and noted the following principles of education: scientific, systematic and current, production with theoretical education unity of labor.

V.A. Skakun - scientific and ideological principles of vocational education; unity of education, training and development; the dependence of education on scientific and technical progress, polytechnicism: the connection of all aspects of training skilled workers; He knows that the differentiation of education.

A.P. Belyayeva: nationalism, scientificity, polytechnicity, systematicity, alternative, unity and interaction of polytechnic and professional education in education; Interprets interdisciplinary and collective interaction, professional mobilization, flexibility and stability of education, embodied and stratified as the main principle.

It is necessary to take into account the requirements of the didactic principle when preparing for training sessions in special subjects. In this case, it is important not only that the teacher of a special subject knows the laws of teaching, but also that he creates favorable conditions for the implementation (explaining). This can be achieved only if one understands that it is necessary to rely on the basic principles of teaching in the organization of the educational process. These principles are called educational principles or didactic principles in didactics.

Didactics (from Greek didactikos - teacher, educator) is considered a branch of pedagogy, which deals with the theory of education. The term "didactics" was first used in Europe in the 17th century by scientists who wrote about the teaching and learning process. Czech pedagogue I. A. Komensky in his work "Great Didactics" (1657) developed the didactic

aspects of educating and educating children and teenagers. The German pedagogue A. Disterweg in his work "Leading the education of German educators" (1834-1835) emphasized that didactics is a separate part of pedagogy that describes the theory of education. After that, didactics was widely regarded as a science of educational theory. In modern pedagogy, didactics is considered as a separate field dealing with the theory of education and enlightenment.

Didactics, as a science that determines the laws of teaching any individual subject and determining its content, should determine the general methods of effective organization of education and enlightenment work. At the same time, since the methodology of teaching individual subjects is based on concrete experiences of educational practice, the principles of didactics are created taking into account the uniqueness of various extraordinary events encountered in the educational process.

After the independence of Uzbekistan, the science and practice of Uzbek pedagogy, relying on national foundations, prepared the ground for the development of didactics in a completely new direction. The change of social consciousness led to the improvement of pedagogical thinking, which, in turn, led to the development of didactics on a national basis. It is crucial to correctly define the main principles of national didactics. One of the main principles of national didactics is the humanization of education. This principle means that the main value for the educational process is not knowledge, but the person of the learner. In this, the formation of the learner's personality is given priority. The principle of humanization of education is one of the main requirements of Uzbek didactics, and in determining the content of education and organizing pedagogical practice, it is necessary to give priority to educational subjects aimed at the formation of individual spirituality. It is important to achieve the formation of children's feelings by paying special attention to the teaching of aesthetic and artistic subjects, and to form the characteristics of will in them. The existence of an integral connection between the spirituality of the learner and his mastery is

proven by modern psychology. A pedagogue who works without taking this situation into account is doomed to failure. Another principle that ensures the development of national didactics is the integrity of education.

Didactics also covers the problem of educational methods. As the teacher strives to ensure systematic knowledge of students in a subject, he shows an example of the performance of certain works. At the same time, it ensures the activity and independence of the learner at all stages of education. Under the guidance of the teacher, students acquire new knowledge based on their experience and observations. Special assignments are given to them for deep and independent learning and creative application of the knowledge they have learned.

Didactics develops the forms, methods, principles, content, task and goals of the teaching process. According to the teaching of pedagogical theory, didactics and methodology are inextricably linked. Methodology is the science of scientific methods. In this case, didactics deals with the questions of "what to teach" and "why to teach", while methodology deals with the issues of "how" and "with what" of teaching in an integral connection with it. . It is necessary to take into account that the system of practical methods depends on the content of a special field. Teaching methodology is a system of various ways and methods, which means a set of methods used in the course of a theoretical lesson to achieve the set goals using educational didactic materials.

Didactics determines the general laws and rules for all educational subjects in connection with special methods, that is, the leading rules that form the basis for the organization of the educational process closely related to education are called didactic rules. These are the main rules that determine the activity of teachers, the knowledge activity of students, and their characteristics.

Didactics is an important part of pedagogy where the theory of education and training is explained. In it, the scientifically based content of education, teaching methods and organizational forms (how to teach) are given.

3.2. Principles of education.

It is important for a teacher not only to know the laws of teaching, but also to be able to create favorable conditions for their implementation. This is achieved by a deep understanding of some leading elementary laws and their application in the educational process. Such laws are called educational principles or didactic principles in didactics.

The principle of awareness and activity in education - the student learns and learns best when he is active. Therefore, the educational process should be organized in such a way that the student has a conscious attitude to learning.

Students must actively participate in every lesson. Because when a student performs some work, he consciously assimilates the work and this knowledge is deeply embedded in his memory. As a result, students get better and deeper knowledge of the lessons, and their interest in the field increases. Only in this way can things like independence and individual learning be achieved. For this, the teacher must have very good methodological skills and abilities.

The principle of conscious mastery of education, on the one hand, implies independent and active thinking of learners, and on the other hand, during this process, it is necessary to educate and improve the activities of independence and activity of learners, as well as logical, free thinking. Consciousness and activity in teaching depend primarily on the accuracy of mental thinking. Activity in thinking is to reflect on the described educational materials or surrounding objects and events in the objective existence. It is manifested in the operations of active thinking, that is, comparison, comparison, analysis - synthesis, abstraction and generalization. Accordingly, in order to achieve conscious and active learning, the educational process (each lesson) should be aimed at activating the thinking activity of learners.

The principle of consciousness and activity in teaching means organizing teaching in such a way that students consciously and actively

acquire scientific knowledge and methods of their practical application, develop creative initiative and independence, thinking, and speech in their educational activities. please

The principle of consciousness in teaching is the understanding of the specific goals of the educational process in students, the understanding of the facts, events, processes and their connections, and the ability to apply the acquired knowledge in practical activities.

Students' activity is reflected in their acquisition of theoretical material and performance of educational and work tasks in the classroom, laboratory, workshop and production conditions. Activity is closely related to the development of students' independence in their academic and work activities.

The principle of connection between theory and practice in teaching requires combining theory and practice in the formation of knowledge, skills and abilities of students during the lesson. In the national personnel training program, it is determined that the strengthening of the position of production in the personnel training system will be ensured in the following ways:

- training of highly qualified personnel on the basis of combining education with productive work at the enterprise, including work in the process of production practice;

- use of the production potential of enterprises in carrying out scientific and technological developments together with personnel and training;

- education of learners in work teams (labor, spiritual and physical education);

- taking into account the needs of production, training, retraining and improving the skills of personnel in new areas of technical and technological development;

- regular training of pedagogical personnel in the field of advanced technologies in direct production;

- involvement of highly qualified personnel of production in the educational process and pedagogical activity;

- providing trainees with jobs to undergo production practice;

- equipping integrated educational institutions with modern equipment, devices and tools.

Since scientific knowledge appears on the basis of the needs of people's production activities, serves this activity and is connected with life, in order to acquire this knowledge, it is necessary to master it and be able to apply it in practice.

Preparation of students for practical activities begins with the process of acquiring theoretical knowledge. It will then be continued with experience and practical training. In these classes, students check, consolidate and deepen their knowledge under the guidance of a teacher. They develop skills and competencies to apply them in practice.

Industrial education is an important stage of students' practical activities. Based on the acquired theoretical knowledge, they develop work skills and qualifications for their chosen professions. At the same time, theoretical knowledge is filled and clarified.

This principle requires that when explaining any rule and law of the science in the description of the teaching material, it should also be shown how and in which cases this law - rules are used in practice. The teacher should not forget to connect the theory with practice and teach students to apply their theoretical knowledge in solving examples, solving problems, in the educational laboratory, educational workshops and various science circles.

The principle of demonstration in education. The instructional principle of education is of particular importance as it is aimed at ensuring the students' perception of educational materials through concrete images. The knowledge, skills and skills that have already been shown, understood, analyzed and synthesized, and used in a practical manner,

are quickly absorbed into the minds of learners and are kept in their memory for a long time.

The instructional nature of teaching confirms that only if students have a certain emotional and practical experience related to the direct perception of things and events, they will consciously absorb knowledge, and they can create scientific imagination and concepts. . This principle requires the use of different senses in the teaching process: sight, hearing, feeling with the body, etc. The more comprehensively the subject is perceived, the fuller and deeper the students' knowledge of the subject.

The principle of instruction is consistent with the teaching goals and is determined by the content of the material. Studying this material should equip students with real scientific and practical knowledge. Instructiveness helps to better master this knowledge and connect it with life and work practice. The use of various instructional tools in the lessons activates the thinking activity of students, draws their attention to the subject being taught. Therefore, instructional tools are used at all stages of education to help students understand a new subject, to strengthen their knowledge, to check and apply it in their practical activities, and to create work skills and qualifications. Applying knowledge as visually and as close to real life as possible requires, on the one hand, language comprehension and the use of audio-visual tools in the teaching process, and on the other hand, it requires teaching directly in the work process and in a real situation.

Visual aids are used taking into account the purpose of the lesson, the character and content of the topic, and the age characteristics of the learners.

The principle of comprehensible sharing of teaching requires that the content, volume and teaching methods of the studied material are suitable for the age, level of training, physical strength and cognitive abilities of students.

Teaching comprehensibility does not mean that it is easily digestible. Extremely easy material is mastered by students without much effort. Such teaching does not help students to develop their intellectual abilities. Comprehension of teaching is determined by the upper limit of the student's capabilities and gradually increasing it. In the course of the educational process, consistently increasing the complexity of the educational and work tasks set before the students develops their mental capabilities and physical strength. The content of the educational material should be selected and structured in such a way that students should be able to relate it to their previous knowledge and should have no difficulty in understanding it.

According to the principle of using examples, the teacher should always try to choose good examples to explain the content of the teaching material. A good model, typical examples from practice, good or bad products also clearly show how the quality of the result will or will not be at the expected level.

According to the principle of didactic reduction, this educational material should be reduced to the required amount in order for the student to acquire knowledge at a high level. If the size of the educational material is very large, the necessary parts should be selected from it. Complex and complex tasks should be simplified, but the meaning should not change. Therefore, if it is necessary to give only basic knowledge, it is necessary to try to explain the educational material as simply as possible and not to burden the student with extremely large and extensive educational material. An experienced teacher can explain complex processes in simple terms.

The principle of scientism requires that students be taught scientifically based, empirically tested information. The latest achievements and discoveries of science and technology should be used in their selection.

In the process of acquiring scientific knowledge, students develop a scientific outlook and thinking. The scientific content of the educational material taught in each lesson should be wide and deep, and it should not

only create knowledge, but also thinking in the student and form his creative ability. For this, the teacher should consistently improve his scientific level, be aware of modern pedagogical technologies, discoveries and scientific innovations. The knowledge that the student learns must be theoretically confirmed and tested in practice. The processes of education and training are inextricably linked. In addition to solving educational tasks, teaching also has a great educational impact on students. It helps to develop students' cognitive abilities and creative abilities, to increase their activity and independence in educational and work activities, and to increase their interest in knowledge.

However, the purpose, content, ideological orientation and effectiveness of education in the teaching process depend on a number of conditions, the main ones of which are: the content of the studied subject, the organization of training sessions and methodology as well as the personal quality of the pedagogue conducting these trainings. The correct organization of training sessions and the methodology of conducting them have a strong educational impact on students. Both individual work of students on acquiring knowledge, training and skills, as well as group views of these works are used in the classes. In order to increase the efficiency of the educational process, the main criterion is to ensure the priority of the educational direction. A person realizes his personality only through education. Only a self-aware person, knowing his abilities and possibilities, creates the need to form his needs.

It is very important to correctly determine the educational aspects based on the content of the subject being taught in the educational process and to ensure its implementation as a whole together with education.

Control questions to strengthen the topic:

1. What are the principles of education?

2. Explain the concept of didactic?

3. Explain the principle of activity?

4. ORGANIZATIONAL FORMS OF TEACHING SPECIAL SUBJECTS

Key words and phrases: Theoretical education, lecture, practical and experimental training, excursion lesson to production enterprises, training in a training workshop.

4.1. Forms of educational organization.

The development of science and technology requires a new approach to the educational process, the use of active methods and technologies of education, because the traditional teaching method based on the power of memory can also increase the thinking and cognitive activity of learners.

Currently, pedagogues working in all educational institutions of our republic face the issue of not only imparting ready-made knowledge to students, but also inculcating in them the skills of independent thinking, creative research, activity and intelligence.

Organizational forms of education mean specially organized activities of teachers and students that take place in a specific order and mode. One or another organizational form of teaching is a combination of collective and individual teaching in various forms, different levels of independence of learners in teaching, different levels of teacher guidance of learners to study. described by methods. The choice of educational organization forms is determined by educational tasks and depends on the content and methods of educational work.

Forms of educational organization are a historically existing, stable and logically completed view of the organization of the pedagogical process, which includes regularity and integrity, self-development, personality and active character, constancy of the composition of participants, It is characteristic that there is a certain order of transfer.

The external appearance of the cooperative activities of the participants of the educational process (educators and learners) carried out in a

certain established order means the organizational form of professional education.

The organizational forms of teaching special subjects are understood as the ways of organizing a team of students for educational and production activities, the forms of leading these activities, as well as the structure of training sessions.

When choosing one or another form of education, in the process of equipping students with professional knowledge, skills and qualifications, the main factors (indicators) that determine their absolute goals and immediate tasks, content and methods, as well as material conditions, depend on one or another form. 'liq.

In the course of the development of human society, the organizational forms of education varied.

In ancient times, the method of individual teaching was widespread, and because it has certain creative aspects, this method has been preserved until now. By the Middle Ages, education began to be conducted in small groups. Because this period was considered the period when industrial production was launched.

At the end of the 19th century and the beginning of the 20th century, the Czech pedagogue I. A. Komensky theoretically proved the class-lesson system. Currently, the organizational forms of teaching special subjects are grouped as follows according to the number of students, place of study and duration of study time (Figure 4.1):

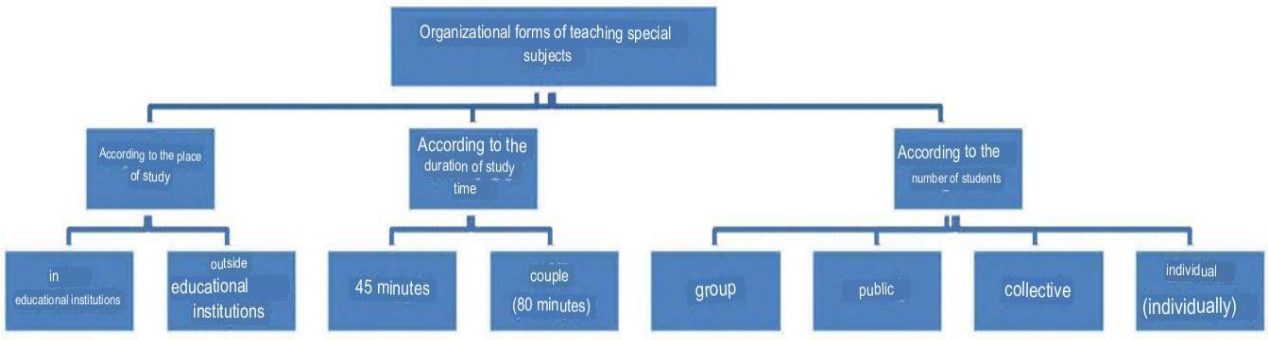

Figure 4.1. Organizational forms of teaching special subjects

4.2. The main forms of theoretical and practical training.

According to social requirements, goals and tasks of special subjects, demands and needs of learners, educational laws, principles, etc., the following requirements should be set for the classes of special subjects:

- the latest achievements of science and technology and production technologies, the use of advanced pedagogical experiences as much as possible, the optimization of the lesson structure based on the laws of education;

- ensuring an optimal ratio of all didactic principles in the lesson;

- creation of conditions for highly effective educational activity, taking into account the interest, needs, and inclinations of learners;

- to adhere to interdisciplinary communication for perfect learning of educational material;

- work based on previously acquired knowledge and life experiences of students;

- achieving development by encouraging all positive aspects of students, activating educational activities;

- based on logic and emotions at all stages of the lesson;

- effective use of didactic materials and tools;

- to study theoretical material by integrating it with practice;

- formation of necessary knowledge, action, rational thinking and methods of practical activity;

- forming the qualification of students to continuously study and improve their knowledge and professional skills;

- predicting and diagnosing the results of perfect lesson planning. Harmonization of interrelated educational, educational and developmental goals in modern lessons in special subjects requires clarification of specific goals in this field.

The following didactic requirements are imposed on modern lessons in the teaching of special subjects:

- clearly defining the educational and developmental task of each lesson;

- optimizing the content of education taking into account social demands and the needs of students;

- organization of educational activities based on effective pedagogical technologies;

- rationally ensuring the harmony of various forms, methods and means of education;

- formation of the lesson structure with a creative approach;

- coordination of various learning activities of students;

- providing quick feedback among the participants of the educational process, using an effective management mechanism;

- organizing the lesson on a scientific and methodological basis. Since the class-lesson system is widely used in practice, the class-lesson is considered the main form of educational work in the teaching of special subjects.

Each lesson is a part of the educational process and a logically completed stage of acquiring knowledge, skills and abilities. In order for the lesson to be successful, it is necessary to determine the purpose of the teacher's activity in organizing it. There are three objectives of any lesson (Figure 4.2).

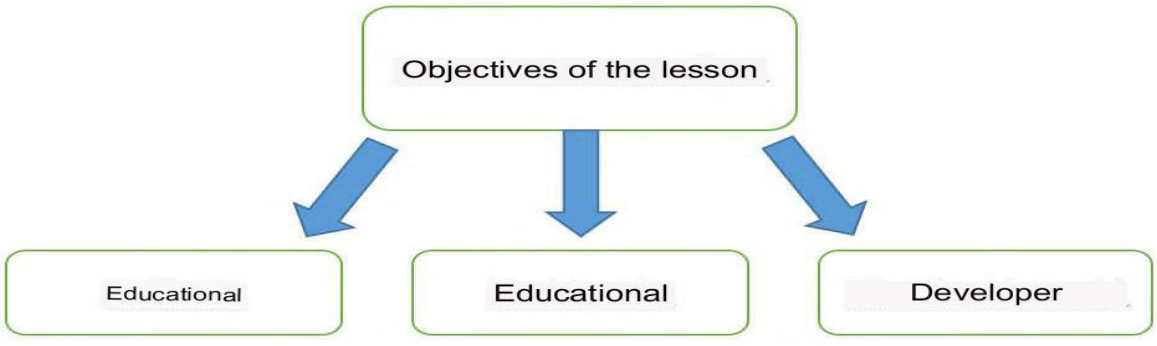

Figure 4.2. Objectives of the lesson.

The educational goals of the lesson include:

- formation of new concepts;

- ensuring the adoption of new laws, regulations, features and symbols;

- teaching new methods of movement;

- elimination of deficiencies in knowledge;

- generalization and systematization of knowledge;

- formation of skills;

- strengthening certain methods of action;

- formation of students' understanding of something by determining connections between concepts;

- identifying worldview ideas and problems;

- formation of students' knowledge on evaluating this or that action, events;

- preparing to draw a conclusion, achieving mastery.

The educational goals of the lesson are to develop the following specific personal qualities and character in students:

- outlook and interest in the profession;

- self-checking and mutual assistance;

- skills to identify and analyze connections between realities;

- skills of transferring knowledge from one field to another;

- skills of making interdisciplinary connections;

- speech culture;

- patriotism;

- conscious attitude to work;

- conscious discipline and good behavior;

- positive attitude to education;

- aesthetic views;

- organization of workplace and checking of own activity;

- belief.

The purpose of development is to form psychological qualities of students, attention, memory, technical thinking and cognitive abilities during the course of the lesson.

The analysis of psychological literature shows the need to develop students' thinking, polytechnic, work, knowledge (understanding) and mental skills, will and independence, and prepare them for future classes. If the formation of knowledge and purposeful education improve students' cognitive abilities, this is recognized as developmental education.

There are the following types of lessons for didactic purposes:

A lesson on the presentation of new material. Lessons on the presentation of new material are conducted by means of conversation, storytelling, explanation, problem situations using various visual aids. The main purpose of such a lesson is to clearly explain the program material. In the process of explaining some topics of the lesson, the teacher checks how students perceive the new material (by asking students one short question) and attracts students to active participation in the lesson. These lessons usually include the presentation of the topic and the purpose of the lesson, the presentation of new material in turn, or the educational literature of the learners, technical literature (magazines, bulletins, albums, drawings, schemes, technological process cards and etc.) or reference includes organizing independent work with literature, answering students' questions, checking the quality of students' mastery of new material, additional explanations, homework

assignments. Such lessons are usually held when the material to be studied is descriptive and easy to master.

Knowledge consolidation lesson. In such classes, interviews with students on previously learned materials, experimental and practical work are conducted, various problems are solved, technological process development exercises, written graphic works, various independent exercises on strengthening and systematizing previously learned materials (drawing up and reading schemes, drawing up tables, analyzing technical documents, etc.) are conducted, films are watched, students give lectures and abstracts. During this work, knowledge is recalled, sufficient evidence, concepts, laws are strengthened in the mind and memory of learners. As a result, knowledge becomes more thorough.

Repetition-generalization lessons. The purpose of these lessons is to remember and systematize the knowledge gained from the studied material, which helps to fill in the gaps in knowledge, to reveal the main ideas and issues of the topic, department and the whole science in more depth. These types of lessons are held at the end of studying a subject or section in the program and at the end of the academic year. One of the main requirements for repetition-generalization lessons is to include in their content new information and methods about the educational activities of students. Repetition-generalization classes are of two types: the teacher conducts a generalizing review lecture on the learned material of the subject, section or course or organizes an extended conversation with students. During the interview, learners perform summarizing exercises, written works and other tasks under the guidance of the teacher.

Test lesson. In these classes, detailed oral question-and-answer, test, written or graphic control work is conducted on the subject, section or the entire course, the knowledge of learners is checked using control devices, card-tasks, review-repetition tables, tasks of a practical nature are performed. The main goal of such classes is to obtain information for

a reasonable assessment of the level of preparation of each learner, to determine how consciously and deeply the knowledge is mastered, and how thoroughly the acquired skills and qualifications are. In addition, when conducting such classes, the teacher fills in the gaps in the knowledge and learning of the students.

Problem lesson. The main directions of further improvement of the educational process aimed at such classes are to activate the cognitive activity of students, develop their independence, and use the most effective forms and methods of teaching.

Creating problem situations, searching for and identifying ways to solve them, the process of solving the problem itself, checking the correctness of the conclusions in practice remain important elements of the educational process.

Creating a problem situation is a necessary condition for the active mental activity of learners. A learner is faced with a certain task, this task arouses his interest, and he tries to solve this task, but he notices that his knowledge and experience are not sufficiently full and deep, that is, he faces a certain difficulty. . The learner has an internal need to find a way out of the situation, the feeling of difficulty prompts him to analyze the situation and look for ways to solve the problem. Thus, there is a conflict between the level of knowledge of learners and the practical tasks that need to be known, and this conflict arouses intensive thinking activity aimed at eliminating the difficulty that has arisen.

The educational process organized on the basis of solving a problem situation is called problem teaching in pedagogy. During problem-based teaching, a problem (problem) is always set and solved. This problem is given in the form of a question, assignment, problem.

When creating problematic situations, it is necessary to follow the following rules developed by the science of pedagogy and tested in practice:

1. Creating a problem situation implies such a practical or theoretical task that the learner must "discover" new knowledge or actions that need to be mastered.

2. The question can be given in the following forms: in the form of a question, in which the information is included in the interrogative sentence; in this case, the definition of the question, its essence should correspond to the real question that appears in the learner while performing the task; in the form of an assignment, it is suggested to draw a conclusion, explain something, justify something in such a matter.

3. The issue should always be based on the knowledge and studies of the learner. They should be enough to understand the nature of the question or task, the main goal and ways to solve it.

4. The problem task offered to the learner must match the intellectual capabilities of the learner. The level of difficulty of the task is assessed by two main indicators: the level of novelty of the educational material to be mastered and its level of generalization.

5. Usually, the problem task should be given before the learning material to be mastered. But if learners do not have enough knowledge and training to solve the problem task, it is necessary to provide them with the necessary information or to teach them certain actions. In such cases, the teacher tells the features of the processes, specific information, and the like, and the learners creatively master the general laws, methods and conditions of the studied actions on the basis of this information.

6. The teacher should always direct the process of students' acquisition of new knowledge by solving problematic issues. The teacher creates a problematic situation, describes the problem, and then by asking auxiliary questions, introducing clarifications, telling some things to the learners to independently understand and define the required law, the method of work or helps to find the condition and draw the necessary conclusion.

7. In order to ensure problem-based assimilation of a certain complex system of knowledge and actions, it is necessary to observe a certain problem when creating problem situations:

- it is necessary to divide a complex task into small, specific tasks; in some cases, the main issue is the only one within several lessons or even a whole topic and is solved as separate tasks;

- in each problematic situation, one unknown element (property, ratio, law of action or condition for its execution, etc.) should be identified as the sought-after element;- it is necessary to distinguish between the didactic functions typical for different problem situations: the first problem situation created at the beginning of the study of the topic should create a need for learners to master the general law being studied; after that, the whole system of specific problematic situations serves to reveal this basic issue;

- in the conditions of problematic situations, it is necessary to differentiate the educational material that the teacher explains and the material that students learn independently; both types of material are usually used in one lesson.

The purpose of these lessons is to determine whether or not students can solve the given problems. Such classes are held after students have acquired certain knowledge, skills and qualifications in special subjects.

General or mixed class. In such lessons, various didactic issues are resolved - homework and student knowledge are checked, new material is explained, etc. They are most common in the study of special subjects. The mixed lesson includes the closest links of the educational process, which is important to ensure that students acquire knowledge thoroughly and consciously.

4.4. Teaching in educational laboratories

Laboratory (from the Latin "laboro" - I work) - an independent institution or department, unit that conducts scientific, production-control experiments or educational training within a scientific institution, ministry, enterprise, educational institution. In higher education institutions, the laboratory is divided into 3 types: educational laboratory (from some academic subjects) - laboratory exercises are conducted with students; problem laboratory - major scientific and technical research issues in basic sciences are solved; industry laboratory - current issues in a specific branch of production are solved.

Tasks of educational laboratories. It is possible to train highly qualified specialists only if the material and technical base of training is well organized.

It is very difficult, sometimes and there will be no icon. For this reason, well-equipped educational laboratories and training areas must be organized both in the educational institution itself and in the enterprises. Learners here acquire the skills to organize the workplace rationally, get acquainted with the mechanisms, equipment, and tools necessary to perform the work, learn the working methods of performing the complex of operations and work in a technological order, the culture of production, o they learn to use the study time wisely, comply with the requirements of safety equipment, production and technological discipline.

The presence of training laboratories creates the necessary conditions for frontal training of students, allows for rational exchange of theoretical training with production training, ensures consistent study of materials in accordance with the program.

The organization of training laboratories, training grounds, their equipment and planning is carried out in accordance with the type of educational institution, the description of the specialties to be trained, and the characteristics of production.

The composition and area of training laboratories should meet the technological standards of design, as well as construction standards and regulations of the relevant fields of industry, construction, agriculture, transport, communication, trade and household services.

Educational laboratories are usually located on the first floor. Taking into account the presence of noisy equipment in educational laboratories, it is necessary to place them in a separate wing or as far away from the buildings intended for theoretical education as possible.

The air temperature in educational laboratories should not be lower than 15-16°C in winter and should not exceed 20°C in summer. This temperature provides the most comfortable working conditions. It is necessary to have a constant flow of fresh air to educational laboratories through natural or artificial ventilation that provides sufficient air exchange.

Educational laboratory rooms built adjacent to the building of the educational institution should be protected from other rooms with sound-absorbing means.

Garbage in educational laboratory rooms must be collected at all times.

The floor of educational laboratory rooms should be warm, flat and easy to clean.

The walls of educational laboratory rooms should be smooth, covered with paint and convenient for wet cleaning.

Educational laboratory rooms should be provided with drinking water.

A first aid kit (first aid kit) should be provided in the educational laboratory room.

There should be a separate closet for storing students' outerwear in educational laboratory rooms.

Work order in educational laboratory rooms. Organization of labor at the workplace on a scientific basis is based on a proper work and rest regime that ensures high work capacity and health. Research shows that learners' ability to work varies significantly throughout the day and week. It can be maintained at a high level or, on the contrary, quickly decrease (when the daily routine is disturbed, when the lighting is bad, when the temperature is high, when there is noise, little or disordered eating, etc.).

During the working day, the students' working abilities are defined by three stages: the first one - the student "immerses" in the work (a state in which the working ability is fixed) and his labor productivity gradually increases; the second is the period of high productivity; the third is a decrease in productivity due to fatigue.

One of the main conditions for the scientific organization of work at the workplace is sufficient lighting of the workplace.

Lighting must comply with the requirements of the State Standard, ensure sufficient illumination of surfaces, be constant during working hours, evenly distribute its light, and not affect the eyes.

Normal illumination depends primarily on the location of the light source. Figure 4.3 shows the correct (a) and incorrect (b, v, g) placement of the light source. The first case is the most correct, because the light source is placed above the worker's head, on the left side, so it does not catch the eye and directly illuminates the desktop without casting a shadow on the work area. In the remaining three cases, the light source was placed incorrectly.

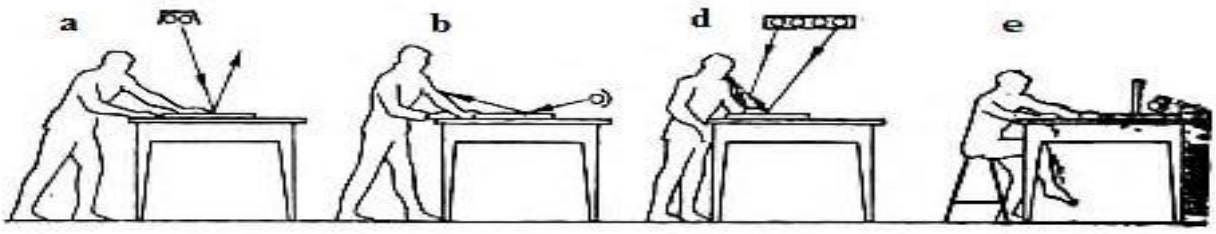

Figure 4.3. Options for placing light sources

a - does not cast a shadow and does not reflect light; b - creates shadow spots on an uneven surface; v - dazzles due to the reflection of light; g - a light source that casts a shadow against the light source.

The reason for the insufficient lighting of the workplace is irresponsible looking at the light source, the lamp is dirty, the absence of a lampshade or reflector can reduce the light by 30 percent or more.

The conducted scientific studies show that the correct lighting of the workplace can increase the productivity of students by 10-30 percent, and keeping the light sources clean by 5-15 percent. As a result of research, it was found that 30 lk illumination causes more fatigue, and 800-1000 lk illumination causes less fatigue. When the illumination is 1000 lk, less errors are allowed. The level of artificial lighting in the metalworking workshop should be fluorescent lamp - 300 lk, incandescent lamp - 200 lk, fluorescent lamp - 400 lk, incandescent lamp - 300 lk in the sewing workshop.

The color (painting) of the building of educational laboratory rooms is an important element in creating an aesthetic interior. However, when painting, you can't look at the color of the paint from the point of view of decorating the building and equipment, because the color affects the person and the entire work process in different ways. For example, white reflects 75%, light gray 55%, yellow 70%, light yellow 45%, gray 35%, and dark brown only 15%. These are the things that should be taken into account when painting educational workshops.

Research has shown that red, orange, purple, and dark red colors have a negative effect on human vision and nervous system. In buildings painted in such colors, the visual organs of workers tire quickly, labor productivity decreases, intelligence and quality of work deteriorate. Green, blue, green and yellow colors have a good effect on the visual organ and psychophysiological functions of a person, increase labor productivity, reduce fatigue. Different colors have been found to affect human mood as follows: red color stimulates the nervous system; green calms; purple brings down one's spirit; yellow color refreshes the soul.

The condition of the air in the workshops, that is, the cleanliness, temperature and humidity of the air, is very important in creating healthy working conditions. Dusty, gassy air, excessive humidity or high or low dry temperature have a negative effect on the body of students. Observations have shown that working in air that meets hygienic requirements increases labor productivity by up to 10 percent. This is achieved by installing a well-functioning flow-suction ventilation. Later, air conditioning is used (maintenance of constant meteorological conditions - temperature, cleanliness and humidity by treating the air).

Organization of work at the workplace on a scientific basis includes the issue of reducing noise and vibration in educational workshops, creating peaceful conditions for work. Studies on occupational hygiene and occupational diseases show that noise in production affects the hearing organs of a person, causes darkness, as well as negatively affects the nervous system and causes the normal functioning of other organs. . Noise and vibration can cause hypertension, ulcers, disorders of the gastric secretion gland and other diseases.

The main directions in the fight against noise are sound insulation, sound absorption and vibration isolation. Some machines, where it is not possible to eliminate the noise, are separated by noise-absorbing barriers.

Control questions to strengthen the topic:

1. What are the forms of teaching special subjects?

2. What are the goals of the lesson?

3. What are the advantages and disadvantages of the class-lesson form of teaching?

4. What are the types of lessons for didactic purposes?

5. How is training organized in enterprises?

6. What kind of activities are organized in educational workshops?

5. METHODS OF TEACHING SPECIAL SUBJECTS

Key words and phrases: Educational methods, oral methods, lecture, story, debate, practical methods, demonstration methods, selection of educational methods, interactive methods.

5.1. Classification of educational methods.

The educational method means the ways of joint activities of the teacher and the students. With the help of these, students acquire knowledge, skills, qualifications, professional skills, develop mental and physical strength and creative abilities.

In pedagogy, there is no uniform approach to the classification and definition of educational methods. Discussions about revealing the meaning of the concept of "educational method" are still ongoing. Some scientists consider the characteristics of the sources of knowledge to be the main factors in determining the method, others consider creative activity and independence in the thinking of learners, and some scientists consider the description of different stages of education in the activities of learners to be important.

In education, its two sides: teaching and learning are always clearly distinguished.

Teaching is the activity of an educator to provide students with knowledge, skills and a system of skills, to develop their knowledge and creative abilities.

Studying is the systematic and conscious work of learners to master the material of the academic subject.

The teaching process is complex and multifaceted and depends on extremely diverse and diverse factors. The teacher has an inexhaustible treasure of teaching methods. Teaching methods are classified as follows (Figure 5.1).

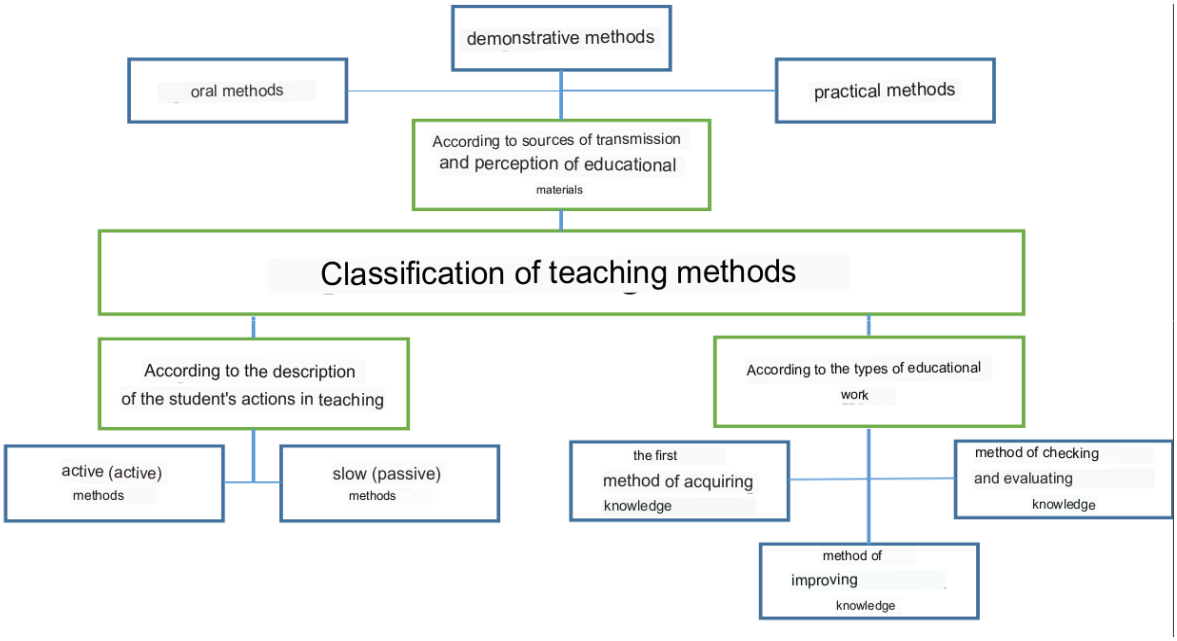

Figure 5.1. Classification of teaching methods

One of the main methods of conveying educational material to students is oral presentation, which includes telling, explaining, and lecturing. In all of these, only one means of teaching is used - the word of the teacher.

Telling involves telling the learning material in the form of a story. This method is used in cases where the educational material is mainly descriptive in nature and differs in logical consistency. With the help of narration, introductory topics, the general structure of machines and mechanisms, the properties and use of materials, issues of general production technology, etc. are usually described.

Explanation involves oral presentation of educational material. In the process of explanation, the teacher uses comparison, comparison, deduction, induction, reasoning, drawing laws, solving problems, etc. Explanation is mainly used to convey private and concrete information. Speaking and explaining from the work experience of teachers are rare, they are often used in the form of a complex method consisting of speaking and explaining.

The lecture, in contrast to telling and explaining, is more clearly structured. Lectures are usually given on major, important issues of the curriculum. In the lecture, the educational material is comprehensively

and coherently presented, the system of interconnected concepts and laws is revealed, internal connections are established between different topics of the course. There will be introductory lectures, review lectures, column lectures and concluding lectures.

A lecture is longer than a lecture (it usually takes the whole class) and involves students writing (summarizing). Listening to a lecture is more difficult than listening to a speech because it requires more attention. Lectures are usually used in the educational process in higher education institutions.

In the process of using oral methods, visual aids can also be used. But they play a supporting role.

Success indicators of using oral methods are students' ability to remember and repeat new knowledge. In oral methods, students repeat the process of the teacher's comments and imitate it.

The closer the student is to the logic of the teacher's explanation, the more successfully he learns the material.

Oral methods are used when learning new material, and they have a good effect in education only if this learning is combined with other methods of learning subjects.

5.2. Demonstration methods

Demonstration methods are understood as forms of mastering educational material that depend to a large extent on the visual aids and technical means used in the educational process.

Visual means of education determine the nature of learning and mastering knowledge. For example, when examples of sewing machine details are shown, the operation of mechanisms can be explained through a virtual model or by showing a video of the technological process performed on a sewing machine.

When such methods of education are used, the cognitive activity of students depends on the emotional images and imaginations that are formed or recalled with the help of visual aids. Visual aids help systematize and enrich knowledge, as well as activate students' thinking.

Demonstration methods of education require a deep understanding of the ratio of figurative and logical, concrete and abstract, emotional and mental aspects in students' cognitive activity.

With the help of demonstration (showing) of visual aids, a specific and clear image of the structure of machines and mechanisms, technological processes, labor actions is formed in students. They imitate him and compare their actions. The application of this method is a clear example of the demonstration principle in the teaching of special subjects. The use of different types and forms of instructional tools in the classes of special subjects helps to better understand the teacher's explanations and mastery, solid formation of skills. In addition to the presentation of slides, maps, schemes, models, layouts, it is also important to show working tools, tools, equipment, raw materials, real samples of products, etc.

5.3. Practical methods

Forms of acquisition of educational material based on exercises, independent tasks, practical and experimental work are included in the practical methods of education. With the help of these methods, practical skills and competencies are formed. The process of forming such skills plays a decisive role in educational activities. The success of acquiring skills depends on the conditions of its formation.

The first condition is to understand the purpose of training. Any skill is a system of actions brought to an automated level. If the student does not understand their importance in mastering the learning material, it will be difficult to form these actions. For example: if the sewing machine does not know which parts of the clothes are intended to be sewn and for this purpose, the order of thread and needles to be selected in accordance with the material of the clothes, it will be difficult to form the movements in performing these works.

Systematic nature of the second condition. As a rule, deficiencies in the acquisition of skills are caused by deficiencies in the organization and conduct of the system of training exercises, that is, lack of provision of the necessary tools for conducting the exercises.

The third condition is to perform conscious actions. It is necessary for students to be based on a specific mental plan of actions, to understand well the consistency of work processes. They should not be mechanically repeated and memorized.

The fourth condition is thorough preparation for practical actions and processes. If they are performed consciously according to a plan, the skill is formed faster and more successfully. For this, students need to acquire theoretical knowledge well.

Independent performance of the fifth condition and self-control. When the student begins to perform the skill independently, he controls his actions. It is necessary for the teacher to teach the student the methods of self-control. For example, after a student learns the process of decorating

a piece of clothing, he learns to do it independently at home and evaluate it.

Sixth prerequisite exercises, analysis of practical cases and their assessment. Learning skills and competencies have positive and negative aspects. Typical mistakes made by students are shown. But good work should be shown and encouraged in the classroom. Teaching by a positive example is preferable.

If the conditions of skill formation are observed, practical methods of teaching will lead to successful acquisition of educational material.

Practical methods include exercises, instruction (guidelines), work with educational manuals, laboratory experiments, formation of professional skills and qualifications.

Exercises - study of the learning process It is advisable to start each new operation with short-term (5-15 minutes) exercises. These exercises are conditionally called educational exercises. In the course of practical work, students prepare various items and continue to practice working methods and actions. Such exercises are called preparatory exercises.

The exercise, which is considered a practical method, envisages that students perform certain actions many times and for a certain purpose in order to develop skills and competencies. When applied to the study of general professional and special subjects, the main goal of the exercises is to strengthen and improve the knowledge of students, to create the skills of applying the knowledge gained in solving various production issues.

Exercises are usually held during the lesson, they are typical for all stages of educational activity, have different didactic tasks depending on their place in the educational process, and must meet certain pedagogical requirements.

One of the necessary requirements for exercises is that they are aimed at a certain goal. Students can only succeed if they have a clear idea of

what is required of them and what they should strive for. Such pursuit of the goal activates students, helps them creatively apply existing knowledge to complete the task.

Students' pursuit of a certain goal while performing exercises implies their high level of awareness. Only then can they not only apply the rules they have learned or the methods of action they have learned to solve the task before them, but also confirm these rules and methods with their own personal examples, which are different from the given examples. they can perform under the conditions. They can explain why they do things the way they do and not the other way around. Consciousness implies that students actively exert their mental powers and take the initiative in practical work. In this regard, it is possible to talk about the students' conscious pursuit of the goal during the exercises. The main goal of the exercises is to develop skills and abilities to apply the acquired knowledge in solving educational and production issues. Naturally, this situation requires the inclusion of exercises in the educational process after students have acquired the necessary knowledge. This requirement applies to all exercises, especially those taught at the initial stages of training. But later, when the students have enough knowledge and practical experience, it is possible to give such exercises that the students do not have some of the necessary knowledge to perform these exercises. In such cases, exercises are a means of acquiring new knowledge, as well as strengthening and improving existing knowledge.

The set of exercises carried out during the study of science should be a well-thought-out, pedagogically based system. The system of exercises, first of all, provides for their strict consistency. Each new skill, new qualification is developed on a solid basis and is easily formed only if it is included in the system of educational science. Students prepare for each new type of work with their previous activities. The system of exercises should be structured in such a way that the complexity of the exercises and the level of independence of students in performing these exercises gradually increases.

When choosing exercises that gradually increase the level of independence of students, it is important not to forget that they should be diverse. This situation is important, on the one hand, in order not to extinguish the interest of students, and on the other hand, to teach students how to apply their knowledge in different conditions.

The effectiveness of strengthening and improving knowledge and building skills during exercises depends on the number of exercises, the systematicity and regularity of their teaching, as well as their distribution in terms of time. The distribution in terms of time, in turn, depends on the character of the studied material. The material that contains the main issues and reflects the basic laws of the subject or science should be carefully reinforced, which will be a reliable basis for the further acquisition of knowledge. Exercises related to the material that students struggle with and make typical mistakes during learning should be done frequently and a lot. But in other cases, despite the importance and complexity of the studied material, exercises should be a mandatory element of educational work, systematically and regularly conducted in every lesson. This creates a certain style in the students' work in the field of work, helps them to acquire knowledge, skills and qualifications thoroughly and systematically. When conducting one type of exercises, it is necessary to repeat them more often, then less often. In order to prevent the learned material from being forgotten and to further strengthen it, it is necessary to include tasks related to its application in the following exercises, and new tasks will be the main ones in these exercises.

As mentioned above, one of the types of interdisciplinary links is the link between students' learning. Based on this, during the exercises, special attention is paid to students' interdisciplinary skills - planning skills, general intellectual and practical skills, book working skills, organizational skills.

5.4. Use of interactive methods in the educational process.

Until now, in traditional education, students were taught to acquire only ready-made knowledge. This method suppresses students' independent thinking, creative research, and initiative.

Today, the interest and attention to increase the effectiveness of education by using interactive methods (innovative pedagogical technologies) in the educational process is increasing day by day. Classes using innovative technologies are aimed at helping students find the knowledge they are acquiring, independently study and analyze it, and even draw their own conclusions. In this process, the teacher creates the conditions for the development, formation, learning and upbringing of the individual and the team. In such an educational process, the student becomes the main figure. Today, it is in the educational process of educational institutions

The main reason for paying attention to the use of pedagogical technologies is the following:

First of all, the Law "On Education" and the "National Program of Personnel Training" pay special attention to the issue of the implementation of developmental education in the scope of the possibility of implementing personal development education in pedagogic technologies.

Secondly, pedagogical technologies provide an opportunity to widely introduce a systematic activity approach to the educational process.

Thirdly, pedagogical technology encourages the teacher to pre-design the technological chain, starting with the goals of the educational process, and ending with the creation of a diagnostic system and control of this process.

Fourthly, since pedagogical technology is based on the use of new tools and information methods, their use ensures the implementation of the requirements of the "National Personnel Training Program". The correct

implementation of pedagogical technologies in the educational process leads to the teacher acting as the main organizer or consultant in this process. This requires more independence, creativity and willpower from the student (or learner).

The use of any pedagogical technology in the educational process depends on the individual character, who is teaching the student and who the teacher is teaching.

Trainings conducted on the basis of pedagogical technology satisfy the desire of young people to express their attitudes to important life achievements and problems, and create an opportunity for them to think and justify their points of view.

In order to solve the problems faced by the educational system in the innovative processes taking place at the present time, independent and free-thinking people are needed who are able to absorb new information and evaluate their acquired knowledge.

Therefore, the role and importance of modern teaching methods - interactive methods, innovative technologies in the educational process of educational institutions is incomparable. Pedagogical technology and knowledge and experience of their use in education provide students with knowledge and mature skills.

Innovation (English innovation) means innovation. Innovative technologies are the introduction of innovations and changes in the pedagogical process and the activities of teachers and students, and interactive methods are mainly used in its implementation.

Interactive ("inter" means mutual, "act" means to act) means to act mutually or to be in a conversation with someone. In other words, interactive teaching methods are a special form of organizing knowledge and communicative activity, in which students are involved in the learning process, have the opportunity to understand and think about what they know and think. will be In interactive lessons, the teacher's role is partly to direct the students' activities to achieve the lesson goals.

The uniqueness of these methods is that they are implemented only through the joint activity of the pedagogue and students.

This process of pedagogical cooperation has its own characteristics, including:

- forcing the student not to be indifferent, think independently, create and search during the lesson;

- ensuring the continuity of students' interest in science during the educational process;

- strengthening students' interest in science by independently approaching each issue creatively;

- continuous organization of collaborative activities of pedagogues and students.

Each lesson, topic, educational subject has its own technology. Pedagogical technology in the educational process is an integral process in a clear sequence, it is a pedagogical process that is focused on one measure based on the needs of the student, carefully designed in advance and designed to give a guaranteed result. The realization of the pedagogical goal and the achievement of a guaranteed result depends on the cooperative activity of the teacher and the student, the goal they set, the chosen content, style, form, tool, i.e. technology.

It is up to the teacher and the student to choose the technology to achieve the goal, because the main goal of both parties is to achieve a specific result, and the technology used is chosen depending on the level of knowledge of the students, the character of the group, and the conditions. For example, to achieve the result, it may be necessary to work with a computer, or a film (or handouts, drawings and posters, information technology, various literature) will be needed. It all depends on the teacher and students.

At the same time, it is necessary to plan the educational process in advance. In this process, the teacher should take into account the specific aspect of the educational subject, the place and conditions, and most importantly, the ability and desire of the students and the ability to organize cooperative activities. Only then can the desired guaranteed result be achieved. In short, it is necessary to bring the student to the center of education.

Currently, in the teaching process in higher education institutions, "Work in pairs", "Concept map", "Work in cooperation", "FSMU", "Blitz survey", "Zig-zag", "Round discussion", " Lily Flower", "Working in Small Groups", "Boomerang", "Debates", "Insert", "Brainstorming", "Cluster", "Cubic", "Concept Analysis", "T -scheme", "Venn Diagram", "BBB Strategy", "Two-Part Diary", "Essay", "Review", "Case Study", "Fish Skeletal", "Assessment", "Step-by-Step", " "Role-playing games" and hundreds of other innovative educational technologies are available, and educators use them effectively according to the content of their lessons.

5.5. Selection of educational methods.

The choice of educational methods depends, first of all, on the educational goals envisaged in the lesson. For example, if the purpose of the lesson is to learn new knowledge, the teacher explains this knowledge himself or organizes students to work independently with the book. In the first case, he can use the method of story, explanation, lecture or conversation, which is combined with showing different things. If students need to develop practical skills in the lesson, the practice method is used for this.

Secondly, it depends on the content of the studied subject and the specific material of the lesson. For example, in the subject of "Sewing Technology", the same methods are used in the processing of clothes, while in the classes of production education, completely different methods are used. In some cases, students can directly observe the studied technological processes. Therefore, the teacher organizes this observation in experiments or in the process of work. If it is not possible to directly observe them, the teacher uses the demonstration of various instructional weapons.

Thirdly, it depends on the previous level of preparation and personal experience of the students. If the new material is completely unfamiliar to the students, the teacher explains it himself, adding instructional tools and showing experiments.

Finally, and fourthly, the choice of a particular teaching method depends on the availability of equipment, instructional tools and other conditions that ensure the normal course of the educational process, as well as the experience of the teacher, work style and personal qualities. The task of the teacher is to improve these conditions and constantly improve his pedagogical skills. When choosing educational methods, the following circumstances should be taken into account:

- leading ideas of modern didactics, general goals of education, upbringing and development;

- to the content and methods of the subject being studied, the subjects themselves characteristic;

- the specificity of the methodology of private subjects and the interrelationship of the requirements for the selection of general didactic methods;

- the purpose, tasks and content of specific lesson material;

- the time allocated to study this or that topic;

- age characteristics, knowledge capabilities, level of learners;

- the level of preparation of students for the lesson;

- the level of material support of educational institutions, auditoriums, availability of equipment, instructional weapons, technical means;

- teacher's capabilities, level of theoretical and practical professional training, pedagogical skills, personal qualities;

- establishment of interdisciplinary cooperation in educational institutions. The teacher, taking into account these circumstances, in one or another sequence orally, makes clear decisions regarding the selection of demonstrative or practical methods, reproductive or independent work management methods, control and self-control methods.

Control questions to strengthen the topic:

1. What do you understand by educational methods?

2. Explain the concepts of reading and teaching?

3. How are educational methods classified?

4. What types of oral education methods are there?

5. What are the characteristics of the interview method?

6. What should be the teacher's speech technique in oral presentation?

7. Explain the advantages of visual methods?

6. MONITORING AND ASSESSMENT OF STUDENTS' KNOWLEDGE, SKILLS AND SKILLS

Key words and phrases: Evaluation, task, functions, types, functions of assessment, pedagogical requirements for assessment, five-point system of assessment, rating system of assessment.

6.1. Evaluation and its importance.

Verification and assessment of learning materials, skills and competences have been acquired by learners is a necessary component of the educational process. It is not only monitoring the results of teaching, but also guiding the cognitive activities of learners at different stages of the educational process.

Evaluation is a process of measuring the level of achievement of educational goals at a certain stage of the educational process based on predetermined criteria, determining and analyzing the results.

The educational importance of testing and evaluating knowledge is that both the teacher and the learner will have certain information when the learning material is mastered. As a result of the evaluation, it becomes clear for the teacher what the students know and what they do not understand, which material is well mastered, which is not mastered enough or not mastered at all. This was considered the basis for organizing and managing the learner's cognitive activity. The teacher makes a critical assessment of the advantages and disadvantages of his work. Also, the results of the assessment are very important for the teacher to revise and evaluate the materials in the curriculum in terms of the learning abilities of the learners.

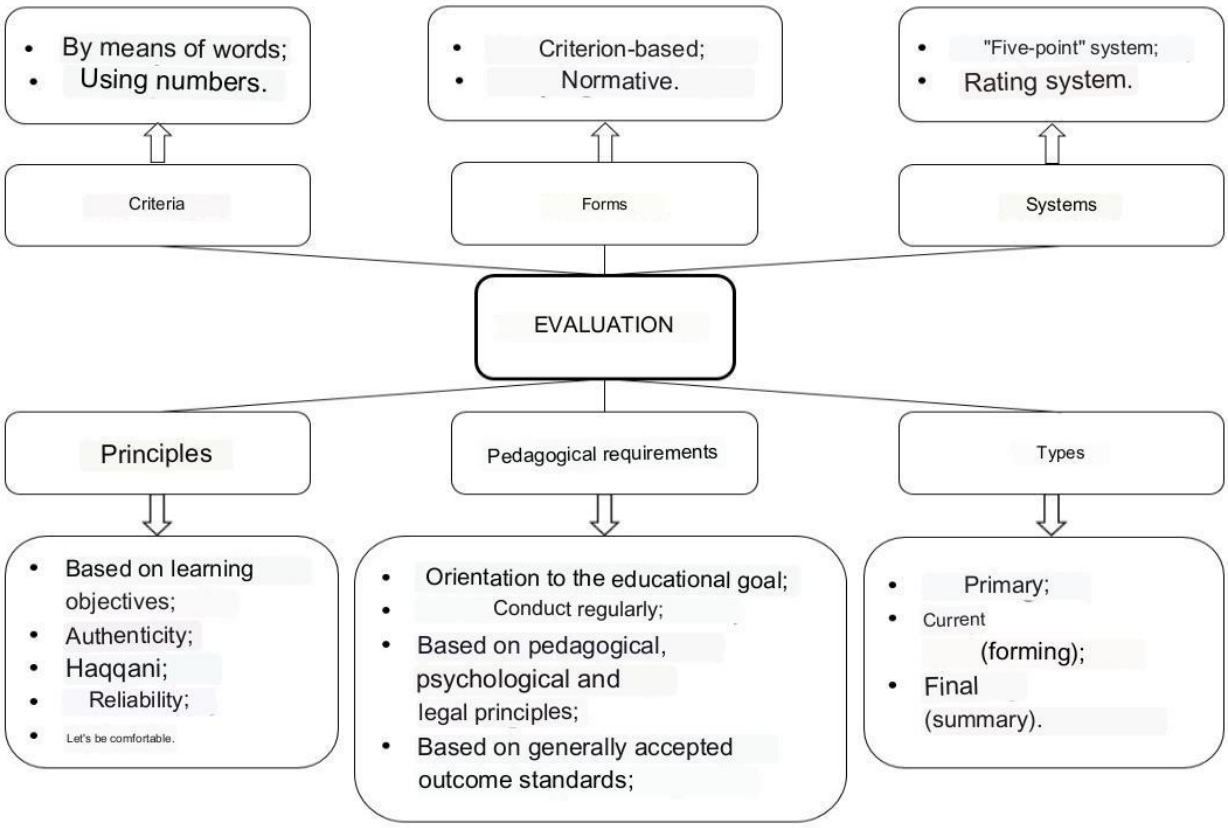

Figure 6.1. Edges of assessment.

As a result of the assessment, it becomes clear which of the concepts and rules are difficult and which are easy to master. It serves as a basis for the learner to creatively prepare for the lesson and conduct the training session. In the same way, it becomes known to the learner which educational material he mastered well, which was satisfactory, and which was poorly mastered during the educational process. Without checking knowledge, the learner is not able to evaluate his knowledge deeply, comprehensively and correctly. Sometimes it seems to him that he has mastered the educational material well, but during the examination it becomes clear that he does not know the material well and does not understand it well. As a result of the assessment, the students' level of knowledge, understanding, memorization, comprehension, practical application, analysis and critical assessment of their knowledge is determined. On the basis of a positive description of his knowledge, the learner will have the opportunity to improve the style of his work in the educational institution and at home, to develop the

positive aspects of his knowledge, skills and abilities, and to correct the shortcomings.

The educational importance of monitoring and evaluating knowledge, skills and abilities is that it forms the attitude of students to study, their achievements and failures, and the desire to overcome difficulties. Evaluation always creates a certain attitude of the learner towards himself as a person. The teacher should focus on forming the student's attitude towards himself, his feelings, his character qualities such as willingness, cooperation, helping each other.

Sometimes in the process of assessment, the learner also acquires additional knowledge, skills and competencies. He understands the essence of the concepts that he did not master during the educational process. Therefore, assessment can be said to be a continuation of the educational process. The learner will never remain indifferent to the attitude of his friends and parents towards him, his achievements and failures in the educational institution. The assessment of his knowledge determines this attitude. That is why praising, approving, reprimanding, giving a good or bad grade shapes the qualities of the learner, his position in the group of peers and among adults. This is especially important among teenagers.

Control and evaluation of knowledge is of state importance. Summarizing the results of the evaluation, the educational activity of the team of the educational institution, the general mastery level of the students is evaluated and appropriate conclusions are drawn. It is determined how well the requirements set by the state are fulfilled in the state educational standards.

The whole education system and its components should be examined at the same time through the evaluation of the results. With this, the level of achieving the expected result in the educational system is checked and measured. Regular assessment of knowledge is carried out on the basis of the educational plan, its major and minor sections. The results of the educational system are expressed through a certain standard norm.

As a result of the assessment, not only the learner's strengths and weaknesses, but also the teacher's strengths and weaknesses in the educational process are identified. The quality of educational tools, plans, organization of the educational process is also evaluated.

Regular evaluation of parts and components of the educational program will ultimately lead to the formation of accurate and fair evaluation. Assessment, summation and summation by sub-sections help to make the final assessment clear. Regularly informing the learner about his results has a positive effect on his pursuit of the goal and the realization of his desires.

Measuring the results of supervision during education, assessing knowledge, skills and abilities is an opportunity for the learner to realize his identity.

Based on the above points, the following conclusions can be made about the nature of the assessment:

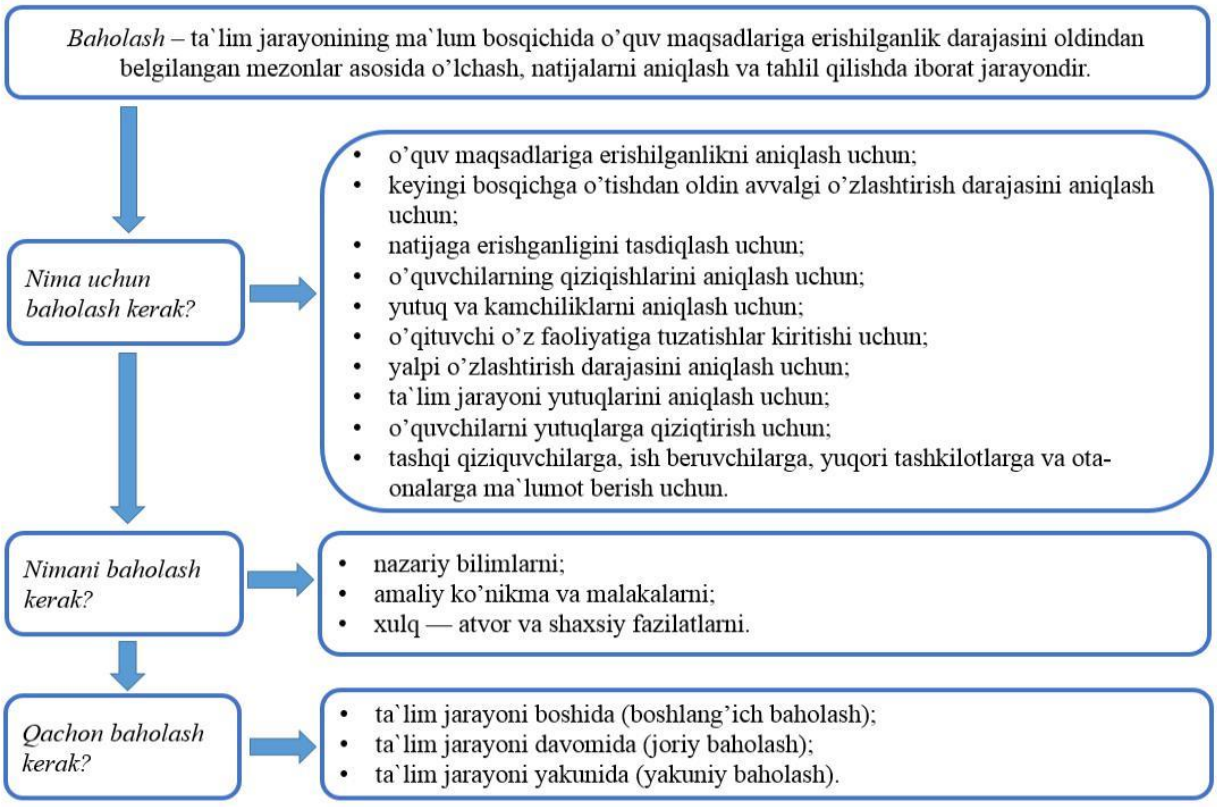

Figure 6.2. The essence of assessment

Pedagogical requirements for assessment:

- orientation to the educational goal;

- to conduct regularly;

- based on pedagogical, psychological and legal principles;

- based on generally accepted standards of results.

6.2. Evaluation criteria, forms and types.

As mentioned above, when theoretical knowledge is evaluated, the levels of achievement of educational goals related to the cognitive field of activity are determined. When practical skills and qualifications are evaluated, the levels of achievement of educational goals related to the psychomotor field of activity, and when behavior and personal qualities are evaluated - to the affective field of activity are determined.

Evaluation criteria. The results of any assessment must be compared, that is, measured. Their comparison can be done based on criteria developed before or after the assessment. Evaluation criteria are an indicator of the extent to which educational goals have been achieved. These indicators use numbers such as ("five", "four", "three" and "two") or words such as ("excellent", "good", "satisfactory" and "unsatisfactory"). can be described. In other words, the evaluation criteria consists of a description of the evaluation indicator, which is adjusted depending on the level of mastery demonstrated by the learner. Assessment forms. Based on its essence, the assessment can be conducted in two different ways:

1. Criterion-based assessment

2. Norm-based assessment.

Criterion-based assessment is a comparison and measurement of the evaluator's educational results, knowledge, skills, and abilities according to common and uniform criteria developed on the basis of predetermined educational goals. is a form of assessment. Such an assessment creates an opportunity to evaluate the results according to the learning objectives that clearly define the criteria. In this way, the results are evaluated directly and objectively, and it also allows to better differentiate strong groups from weak groups. This evaluation form consists of two stages, in the first stage, the results achieved by the evaluator are determined, and in the second stage, the results are compared to the criteria and measured.

Advantages of criterion-based (or target) assessment:

- is evaluated according to the educational goal;

- objectively evaluates the level of learning of the learner;

- the learner clearly shows the mistakes he made in the grade he received;

- objectively determines the strengths and weaknesses of the evaluators in the evaluated field, increases their confidence in their own knowledge and skills;

- establishes the same knowledge and qualification requirements for everyone;

- defines the content of education;

- increases the responsibility of the evaluators for the results of their activities.

Disadvantages of Criterion Based Assessment:

- development of criteria takes a lot of time;

- the large number of requirements for clarifying the objectivity, truthfulness and accuracy of the criteria;

- difficulties are encountered in the development of criteria for social sciences.

Norm-based evaluation is a form of relative evaluation, which consists in measuring the results obtained by the evaluators in the educational process through mutual comparison.

6.3. Basic principles of assessment.

Examination and assessment of knowledge must meet certain didactic requirements. Inspection and control must be systematic and permanent. If this requirement is not met, the attitude of students towards studying will deteriorate and the quality of knowledge will be negatively affected.

Assessment of knowledge is individual in nature. Every learner should know what knowledge, skills and competencies are being evaluated. The state of readiness to answer the teacher's questions and tasks occurs only if the examination and evaluation of knowledge becomes an important part of the educational process, its structural part.

The knowledge, skills and qualifications of the learner are checked and evaluated in terms of the implementation of the state curriculum.

There are different forms of checking the knowledge, skills and qualifications of learners. Sometimes the teacher uses the same methods of testing knowledge for a long time. In it, a certain habit appears in the field of asking, asking questions, explaining the grade. Learners adapt to this kind of examination, they know in advance how the teacher will ask. They begin to answer only for the teacher, to satisfy him.

The following five basic principles are the foundation of the effectiveness of the evaluation system:

- based on educational goals;

- authenticity;

- truthfulness;

- reliability;

- convenience.

Based on educational goals. The main principle of effective assessment is based on educational goals. The quality of assessment is directly related to learning objectives. Learning objectives determine the content of the assessment. Forms and methods of evaluation are selected

depending on the level of educational goals. Also, the result of activities performed to achieve educational goals is important in determining evaluation criteria. When designing any evaluation system, it is required that the evaluation tasks be within the scope of the given educational content. When designing an evaluation, two questions should always be kept in mind:

1) Do the assessment tasks fully reflect the educational goals of the educational process?

2) Was the form, method and criterion of assessment chosen correctly for the level of the educational goal?

For example, the method of taking a written test may be suitable for evaluating the acquired knowledge of traffic rules. But it cannot be used to evaluate driving skills. It is desirable that these skills should be evaluated using an evaluation method based on practical activities rather than oral or written.

Authenticity. An assignment or test aimed at evaluating only the intended result for educational purposes is valid. It should be focused on results in the field of knowledge and skills to be evaluated.

It is necessary to give based and reliable information about the results achieved by the learner. Only what needs to be measured should be measured. It is necessary to use methods that allow measuring the knowledge, skills, and personal qualities acquired by the learner.

Honesty (objectivity). Such assignments and tests are valid only in cases where different teachers give the same assessment on the same tasks and tests given to the same learners. This validity also applies to assessments given at different times. These criteria are often implemented centrally, only during general "official tests". The tests created by the teacher usually do not meet these requirements.

The evaluation system should be compatible with educational goals, and students should be familiar with the conditions and goals of evaluation

in advance. Students should be given tasks of the same complexity and volume.

Reliability. Various methods can be used to evaluate the results. However, the main condition for choosing these methods is reliability. In order for the method to be reliable, the assessment must be based on reasonable and accurate data. This refers to how reliable the assignment or test is aimed at controlling the learning objectives.

In order for the assessment to be reliable, the results should be the same when the assessment is conducted on similar learners, but in different conditions. The reliability of the assessment method is determined by comparing the results of different methods. In order for the evaluation system to be reliable, its results should be similar when the evaluation is conducted at different times with the help of different experts.

Let's be comfortable. Based on the educational goals, the evaluation system should be compatible with educational and production standards, should not be complicated, should be convenient for the supervisor and the learner. It is advisable to use computer technologies as much as possible in conducting the assessment.

If grading is provided during an assignment or test, grading should be tailored to monitor learning objectives. In this case, it is necessary to give more points to the more important parts of the subject than to the less important parts.

Some errors encountered during the evaluation process. There are a number of mistakes in the assessment related to the personal views of the teacher, which are the following.

The error of benevolence. If a teacher is showing favoritism to a student, this may lead to a slightly higher grade.

High request error. If the teacher sets high standards for himself and applies the same high level of standards to the students, this situation may lead to a slightly lower grade.

Average rating error. This error means that the results of the learners are averaged. The reasons for this may be related to the teacher's fear of giving too good or too bad a grade.

The mistake of not changing one's mind. Because the teacher does not want to change his first opinion, he leaves the results of his control unchanged. A positive or negative impression left by a teacher on a learner due to a single incident causes him to ignore all other characteristics of the learner's personality.

Dislike error. Because of dislike or negative opinion of a learner, the teacher gives a bad evaluation to the learner. This fallacy is the opposite of the Fallacy of Benevolence. In order to avoid errors in the assessment of the educator, the following should be followed:

On the precise development of evaluation criteria and their correct selection:

- developing a control sheet;

- not one, but two evaluators;

- correct selection of assessment methods;

- use of effective assessment system;

- conducting and formalizing assessment tasks and answers to them in writing as much as possible.

Rules that should be followed to prevent errors in the assessment:

- before the assessment, the teacher should discuss the assessment criteria together with the students;

- after the evaluation is set according to the criteria, it should be reported to the students.

The teacher should discuss with the student the results of the obtained grades and the mistakes made and determine their reasons. They should determine measures to prevent the repetition of mistakes.

Rating systems. Currently, the following two evaluation systems are used in higher education institutions of our Republic:

1. The "five-point" rating system.

2. Rating system of assessment.

The following didactic requirements are imposed on the evaluation in the five-point evaluation system:

- inspection and control must be systematic and continuous. If this requirement is not met, the attitude of students towards studying will deteriorate and the quality of knowledge will be negatively affected. Learners must prepare for the lesson every day (constant supervision of the teacher forces this);

- assessment of knowledge is individual in nature. Every learner should understand that his knowledge, skills and abilities are being evaluated.

Based on state educational standards. The knowledge, qualifications and skills of educators are checked in terms of the implementation of state educational programs.

6.4. Rating system of monitoring and evaluating student knowledge in higher education institutions.

Assessment of students' knowledge in higher education institutions approved by the order of the Minister of Higher and Secondary Special Education of the Republic of Uzbekistan No. 204 of June 11, 2009 "The rating system for monitoring and evaluating students' knowledge in higher education institutions is complete on" will be implemented based on the Regulation.

The goal of monitoring and evaluating students' knowledge through the rating system is to achieve competitive personnel training by managing the quality of education, to prevent gaps in students' mastery of subjects, to identify and eliminate them.

The main tasks of the rating system are as follows:

a) control and analyze the level of students' formation of relevant knowledge, skills and qualifications in accordance with State educational standards;

b) the main principles of assessment of students' knowledge, skills and qualifications: ensuring assessment based on state educational standards, accuracy, authenticity, reliability and convenient form;

c) organization and analysis of mastering of subjects by students in a systematic manner and within specified periods;

g) development of students' independent work skills, organization of effective use of information resources;

d) impartial and fair assessment of students' knowledge and timely notification of its results;

e) ensuring comprehensive and continuous training of students in subjects;

j) creating conditions for computerization of organizational work of the educational process. Assessment of students' knowledge of subjects in

the semester is carried out on the basis of rating control tables and assessment criteria.

The types of control, its procedure and criteria are discussed and approved by the educational and methodological council of the higher education institution (faculty) with the recommendation of the head of the department, and are shown together with the types of training in the working curriculum of each subject. .

Rating control tables, control type, form, number and the maximum points allocated to each control, as well as information about the qualifying points of the current and intermediate controls are announced to students in the first session of the subject.

In order to ensure the compliance of the students' level of knowledge and mastery with the State educational standards, the following types of control are provided:

current control is a method of determining and evaluating the student's level of knowledge and practical skills in science subjects. Based on the nature of the subject, the current control can be conducted in the form of oral inquiry, test, interview, control work, colloquium, homework check and other similar forms in the seminar, laboratory and practical classes;

interim control is a method of determining and evaluating the student's level of knowledge and practical skills after the completion of the relevant (including several subjects) section of the curriculum during the semester. The number of interim control (should not be conducted more than twice per semester) and form (written, oral, test, etc.) is determined based on the total number of hours allocated to the subject;

final control is a method of assessing the level of students' mastery of theoretical knowledge and practical skills in a specific subject at the end of the semester. The final control is conducted in the form of "WRITTEN work" based mainly on basic concepts and expressions.

The process of conducting interim control is periodically studied with the participation of the commission formed by the head of the department, and in case of violations of the procedures for conducting it, the results of the interim control are canceled and the intermediate control is re-conducted.

By order of the head of the higher education institution, the internal control and monitoring department or the commission formed under the leadership of the educational and methodical department will periodically review the process of final control, and in case of violation of its procedures, the final the control results will be canceled and the final control will be re-conducted.

Based on the rating system of monitoring students' knowledge level, skills and qualifications, the student's level of mastery in each subject is expressed by points.

Student's achievement rate for each subject during the semester

It is evaluated in integers on a 100-point scale.

These 100 points are distributed by control types as follows:

- 30 points for final control;

- 70 points for current and interim controls (depending on the nature of the subject, 70 points are distributed by the department to current and intermediate controls).

Coursework (project, calculus-graphic works), qualification practice, final state certification in science (interdisciplinary), graduation qualification work and scientific research and scientific- mastery of pedagogical work, master's thesis is evaluated in a 100-point system. The dean of the faculty, the head of the department, the educational department, and the internal control and monitoring department control the assessment and formalization within the established requirements.

At the end of the semester, the points scored by the student in the control types of the subject are recorded in the rating register with whole

numbers. In the "Hours allotted in the curriculum" column of the rating notebook or the electronic system for recording student ratings, the total hours of study allocated to the subject for the semester are entered, and in the "Grade from the subject" column, the mastery in the 100-point system is entered.

A student's achievement below the qualifying score is not recorded in the rating book.

The results of the types of control carried out in each subject are recorded in the group journal and report and are brought to the attention of the students on the same day (if the type of control was conducted in the form of a written work, within 2 (two) days).

According to the results of the final control, the science teacher determines the rating of the students in the subject and fills in the relevant part of the rating notebook and record.

In higher education institutions where the electronic system of student rating accounting has been introduced, the rating of students by subject is recorded in the rating register and this system.

The rating of the student determines the level of his knowledge, skills and qualifications. The overall rating of the student for the semester (course) is determined by the sum of rating points collected from all subjects.

The overall ranking of students is announced after the end of each semester and academic year.

When the diploma supplement or academic reference is issued by the educational department (educational and methodological department) in higher education institutions without a deanery or faculty structure, if the subject lasted several semesters, the sum of the ratings is taken.

When assigning an honors diploma to a student, his mastery of subjects at the end of each semester is taken into account.

The results of the current, intermediate and final control are regularly discussed at the meetings of the department, the Faculty and the Scientific Councils of the higher educational institution, and appropriate decisions are made.

According to experts, today's problems in the field of rating system for monitoring and evaluating student knowledge are as follows:

- although it is envisaged that the student will master the subjects taught during the semester in a systematic way and within the specified time, but in most cases, some students do not pass the control types on time;

- the form of conducting final examinations (written or oral) of subjects in the semester according to educational directions and specialties is determined by the Faculty Council based on the characteristics of the subject. After final control is held, 2 days for written assessment and 1 day for oral assessment cause certain problems. In particular, professors and teachers who have taught in large groups during this period do not have time to honestly evaluate the students' learning, inform them of the results and issue records;

- based on the characteristics of the taught subjects, it would be expedient for professors and teachers to develop the requirements for conducting final inspections and to discuss them in the relevant councils;

- in practice, many mistakes are made by professors and teachers when issuing rating records, such as writing over the points in the records, incorrectly calculating the rating points, not recording the points with whole numbers, etc.;

- although the results achieved by the students according to the types of control are entered into the computer memory of the departments, deaneries and educational-methodical administration, but the possibilities of regular analysis by the officials and departments are limited. This problem is caused by the large number of students and subjects;

- in some deaneries and departments, the rating control plan of students' knowledge by subjects, the list of questions approved by the faculty council for current, intermediate and final controls, the results of current and intermediate controls are not regularly highlighted in the Rating window.

Control questions to strengthen the topic:

1. What is the importance of assessment in the educational process?

2. What are the forms and types of assessment?

3. What are the evaluation criteria?

4. What are the advantages and disadvantages of the "5" rating system?

5. What mistakes are made in the assessment related to the personal views of the educator?

6. Explain the essence of the rating system?

7. According to the rating system, how many points are allocated to the current and intermediate controls?

GLOSSARY

Abstract thinking is a type of thinking based on abstract concepts about properties, relationships, and laws of things and events that cannot be directly perceived.

Abstract concepts are concepts that reflect the abstract characteristics, properties, quality and mutual relations of things and events.

Authoritarian pedagogy is based on the authority of the teacher in the leadership of the educational process, blind and unconditional obedience of the students.

Authority is a person's reputation recognized by others, his virtue, his influence on others and his framing by them.

Adaptive training is training aimed at ensuring the learner's adaptation to the transport environment, the team, and the ability to perform work tasks.

Algorithmization is the process of determining the mutual arrangement of the structural parts (modules) of pedagogical technology and the order (rule) of the sequence of implementation of pedagogical technology processes.

Bachelor, Master - programs according to the relevant stage of higher education academic degrees awarded to those who have successfully mastered them. Bachelor's degree - higher education on the basis of secondary special, vocational education basic higher education, which provides fundamental knowledge in one of the fields, and the duration of study is less than four years.

Evaluation is a process of measuring the level of achievement of educational goals at a certain stage of the educational process based on predetermined criteria, determining and analyzing the results.

Knowledge is understood as the imagination and concepts of people about things and events in life, about the laws of development of nature and society.

Scientific knowledge means knowledge that is systematic, fundamental and penetrates deeply into the essence of things and events. Empirical knowledge is the result of the application of observation, measurement, and experimental methods of knowledge.

Theoretical knowledge means the description and explanation of empirical situations, that is, the discovery of laws that allow to know the essence of things and phenomena.

Knowing is the highest form of reflection of objective existence in the mind, the process of creating real knowledge.

Emotional knowledge - through sensations, perception, imagination.

Rational knowledge is a place in theories after concepts, judgments, mental conclusions.

Verbal - expressive, oral.

The state and society are the guarantees of personnel training and their reception, which regulate and control the activities of the education and personnel training system.

Diagnostics is a department of pedagogy, the purpose, content, methods, tools, quality and effectiveness of educational processes, professional readiness, knowledge, skills, qualifications and skills of educational staff, assimilation of knowledge by learners and conducts a comprehensive study of education levels, draws conclusions based on analysis, evaluates and makes recommendations for further improvement.

Heuristics is a system of teaching by asking guiding questions; educational method that helps to develop resourcefulness, activity; academic; develops optimized thinking.

Exclusive features and other signs that are unusual, unique to a specific object.

Empirical knowledge based on emotional experience and understanding that emotional experience is their only source.

Activity is a desire to quickly and effectively perform mental, physical and other actions towards a goal.

Science is a field that prepares and uses highly qualified specialists, develops advanced pedagogical and information technologies.

Group education is a form of education in which one teacher teaches several learners. Groups are divided into small (3-6 students), medium (7-15 students), large (more than 15 students) groups depending on the number of students.

Collaborative pedagogy is a system aimed at providing education based on the interaction of teachers and students.

Vocational pedagogy is a branch of general pedagogy, which provides a number of theoretical and practical information on upbringing, education, teaching. Vocational pedagogy deals with issues of industry, production and labor pedagogy.

The national personnel training program is a fundamental reform of the personnel training system, that is, consistent advancement of the Republic on the path of building a democratic legal state and a just civil society; the implementation of fundamental changes in the country's economy, the consistent transition of the republic's economy from the direction of raw materials to the production of competitive products, the determination of the priority of individual interest and education in the state social policy, the realization of national identity progress, instilling respect for the rich national cultural-historical traditions and intellectual heritage of our people, strengthening the global position and reputation of the republic.

Professional pedagogical communication is a system of intensive social-psychological communication between pedagogues and learners,

its content is information exchange, educational influence, organization of mutual relations with the help of communication tools.

Professional training - psychological, psychophysiological, physical and scientific-theoretical and practical training of a future specialist.

Professional knowledge is a unit of theoretical and practical training necessary for pedagogical activity. Methodology-pedagogy is a branch of science that includes the methods and means of monitoring and evaluating the laws, rules, forms of organization, implementation and results of teaching.

Method is a Greek word that means way, moral method. A way of knowing and researching the phenomena of nature and social life. Activity, way of movement, method or image, shape, appearance.

Master's degree - higher education on the basis of a bachelor's degree in a specific specialty with a duration of at least two years;

Qualifying practice is a part of the educational process, which is conducted to strengthen theoretical knowledge, create practical skills and qualifications, and collect materials on the subject of a certain (final) part of the educational program.

Professional development is the process of updating and developing professional knowledge and skills of specialists and managers.

Qualification requirements - requirements for the level of general knowledge and professional training of a graduate of the relevant stage of continuous education.

Marketing is a deep study of the market situation, production of goods, organization of services, creation of ideas and organization of their sale, knowing the prices in advance, ensuring high profit.

A skill is a characteristic acquired by a person through experience.

Methodology is a set of methods and ways of carrying out a task in accordance with the purpose. Methodist (stylist) - teaching a subject or educational work expert in the field of methodology.

Methodological - related to methodology, theoretical justification.

Methodology is the doctrine of the scientific method of knowledge.

A motive is a combination of various reasons that encourage a person to study or perform certain actions.

Theoretical analysis - identification and analysis of special aspects, characteristics of pedagogical phenomena.

The level of higher education is the result of mastering a specific educational program of higher education by a person, given the relevant state document about this information.

A state document (diploma) on higher education is a document of the state model issued to graduates of accredited higher education institutions and confirming that they have completed the educational programs of higher education.

Higher education is an independent type of continuous education that trains highly qualified specialists and is carried out in higher education institutions.

The classification of higher education courses and specialties is a systematized list of undergraduate education courses and master's courses for the training of highly educated personnel.

The state educational standard of higher education is a standard that determines the qualification requirements for a specific field of education for a bachelor's degree or a master's specialty, the content of education, the necessary and sufficient level of bachelor's or master's training, and the levels of assessment of the quality of personnel training document.

Pedagogy is a science that studies theoretical and practical issues of education, which serves the goals of raising a well-rounded person.

Individual education is in two forms: 1) teaching one learner by one teacher - dual form of education; 2) independent education - a unique form of education.

Final state attestation - assessment of the quality of completion of the higher education program by the graduate in accordance with the qualification requirements for the bachelor's or master's degree, by means of certain requirements and procedures (state attestation in subjects, graduation work or master's thesis defense).

A person is the main subject and object of the personnel training system, the consumer of services in the field of education and their implementer.

TEST

1. Education as a whole system includes which of the following interrelated elements?
   #Educational purpose, educational information, educational activities of teachers and students , its forms, pedagogical communication tools , as well as methods of managing the educational process.

Textbook, manuals
Teacher, student
Material and technical base of the educational institution

2. What is DTS?

#DTS (state educational standard) defines the means, methods and methods of educational content forms and the procedure for assessing their quality

Textbook, manuals
Teacher, student
Material and technical base of the educational institution

3. What is the curriculum?
   # Curriculum refers to the state document that defines the subjects to be taught, the hours allocated for teaching and the structure of the academic year
   Textbook, study guide;
   Dictionary, data sets, electronic textbooks ;
   Collection of lectures, methodological manual ;

4. What are the curriculum requirements?

Strictness, scientificity of the program, correct selection of the content of the educational material, unity of theory with practice , : placement in a sequential and concentric (centered) manner

Scientific
Accuracy
Systematic

5. What principle is followed in the taxonomy of objectives?

#Taxonomy of goals, that is, the principle of "from ease to difficulty" or "from simplicity to complexity" is used when choosing goals.
Scientific
Accuracy
Systematic

6. What process is meant by pedagogical activity?
   Pedagogical process is a process aimed at forming a human personality ;

Pedagogical process - educational process for computer technology;
The owner of the profession of special preparation for education and upbringing of children ;

#Labor activity of specially prepared persons for preparing the young generation for life and work.

7. Show the main principle of person-centered education.
   A teacher will be placed in the educational center;
   # The student (student) is placed in the educational center;
   A pedagogical team will be placed in the educational center;
   Material and technical support of the educational institution is taken into account.

8. Verbal teaching methods are shown correctly in which answer ?

Story, conversation, exercise;
Lecture, training, interview;
Story, conversation, lecture;
Lecture, seminar, laboratory work.

9. What is the methodology?
   # Methodology is the doctrine of method or the theory of methods;
   Science teaching rule;
   Network of Science;
   Non-method-based teaching methods.

10. What do you mean by innovative method?
    # Introducing and applying innovations in education
    Use of traditional teaching methods
    Use of technical tools in teaching
    Conducting training in connection with practice
11. What determines the main place in imparting new knowledge in the course of the lesson?
    Laboratory;
    # New topic statement ;
    Independent work;
12. Which principle is followed when choosing educational material?
    Start easy;
    Students need to pass only easy subjects;

Developing the educational material from simple to complex ;
Ensuring the perfection of educational material ;

13. Understanding and empathizing with other people's mental states is a type of ability?
    Communicative;
    Didactic ;
    Constructive;
    # Empathic.
14. What depends on the choice of teaching methods?
    To the type and type of training ;

To the training topic;
To the logical direction, content and nature of independent work of educational materials;
To the knowledge of the teacher ;

15. How is distance learning implemented?
Through educational literature;
Through communication technologies;
Through computer technology ;
Using interactive styles ;

16. Who has the right to engage in pedagogical activities?

Persons of high moral character with relevant education and professional training
Persons with strong knowledge and high moral qualities
Persons with strong knowledge
Persons with relevant higher education

17. Find the methods that belong to the group of problematic methods.

Conversation in the nature of problematic research ;
Story;
Practical work;
Lecture.

18. What are the tasks of the pedagogical process?
Formation of knowledge, skills, qualifications;
Mastering the content of academic subjects;
Education , education, development;
Development of cognitive activity.

19. In which answer is the sequence of formation of given concepts correctly expressed?
M skill-skill-knowledge-concept

Skills-knowledge-competence-concept;
Concept-knowledge-skill-competence;
Skill-knowledge-concept-competence.

20. Which didactic principle is reflected in the use of technical tools and slides in education?
Unity of education and training ;

Unity of
theory and practice;
Awareness and activity;
Visibility.

REPUBLIC OF UZBEKISTAN
MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION
NAMANGAN STATE UNIVERSITY

" I APPROVE " _
Vice-rector for shooting affairs
_____ D. Kholmatov
" ___" _____ 2023

CURRICULUM OF

METHODOLOGY OF TEACHING SPECIAL SUBJECTS

202 3/ 20 24 academic year , Master 's degree , for 1st year students

Field of knowledge: **3 00000 - Social sciences, journalism and information**
Field of study: **310 0 00 - Social and behavioral sciences**
Master's specialty: **70310102- Economy (industries and sectors by)**

Namangan-202 3

Science /mod u l code METTSD3.5		**Academic year** 202 3/ 202 4	**Semester** 1	**EKTS - Loans** 3.5
Subject/module type Mandatory		**Language of education** Uzbek		**Class hours per week** 1st semester 2 hours
	The name of the subject	**Audience training (hour)**	**Independent study (hours)**	**Total load (hours)**
	Economic and social geography	42	62	104

I. The content of science

of teaching science - equipping masters with knowledge, skills and qualifications related to the methodology of teaching special subjects.

The task of science is arming the master's student with knowledge of the theoretical foundations of the teaching methodology of a special subject; to acquire the skills necessary for the effective organization of the pedagogical process methodologically; orientation to use modern technology in a wide range, taking into account the peculiarities of the pedagogical discipline; consists in forming preparation for creative and methodical literacy in the implementation of pedagogical activities.

II. The main theoretical part (lecture sessions)

II.1 . _ The subject includes the following topics

Topic 1. Special subjects and their peculiarities.

The role of pedagogy in the system of special subjects. Innovative approaches to the teaching of pedagogical subjects. Issues of interdisciplinary integration in the teaching of special subjects.

Topic 2. Teaching in higher education process as a whole system.

Analysis of concepts of holistic pedagogical process, educational process, systematic approach. Pedagogical axiom. A systematic approach to teaching professional subjects. The personality of the pedagogue and his methodological competence in teaching special subjects. Determination of educational (educational) goals. Assessment of the achievement of educational goals. Stages, laws and principles of educational process design. Acquaint students with the rules of designing and planning the educational process

Topic 3. Educational-normative documents of higher education teacher.

The personality of the teacher and his professional competence. Innovative competence of the teacher. Requirements for the creation of educational and normative documents, educational and methodological complexes, educational technologies, educational literature. Teacher's personal work plans, calendar thematic plans. The procedure for keeping journals of the group and professor.

Topic 4. Content of higher education

Field orientation in determining the content of special subject teaching. Principles of determining the content of special education. Unity of teaching purpose and content. Ability to ensure mastery of special subject teaching content. Learning object, mastery object and learning result.

5 . Forms, methods and means of teaching special subjects

Forms of teaching specialized subjects in higher education. Formal, informal and virtual form of education. Distance forms of teaching special subjects. Forms of teaching special subjects: lecture, practical, seminar, laboratory, independent study. Special science teaching methods: traditional and innovative series. Teaching tools: graphic organizers, teaching aids, handouts.

Topic 6. Teaching in higher education from the audience except forms

The role of independent education in strengthening the results of special education in higher education. Content of coursework in special subjects, didactic requirements for its preparation and formalization. Requirements for completion of graduation qualification work, organizational and scientific-methodological support, method of organizing and conducting educational and professional pedagogical practice in special subjects, consultation hours.

Topic 7. Special sciences teaching in the process of students knowledge, Don't worry and qualifications evaluation system.

Peculiarities of evaluating the system of students' knowledge, knowledge and skills in the process of teaching special subjects. Methodology of organization of supervision, evaluation of students and use of international evaluation programs in the process of teaching special subjects. Pedagogical qualimetry.

Topic 8. Special in higher education sciences teaching in the process pedagogical from technologies use

The general nature of educational and educational technologies. Elements of educational technology pedagogical system. Conditions for organizing the educational process and the functional structure of educational technology. Types of pedagogical technology used in teaching special subjects: person-oriented educational technologies: cooperative pedagogy, problematic, interactive, game, differentiated, developmental educational technologies. Methodology of using pedagogical technologies in the process of teaching special subjects.

Topic 9. Special sciences teaching in the process information from technologies use

Information and communication technologies in education. Methodology of using information and communication technologies in the teaching of specialized subjects. Presentation, electronic textbook creation technology. Methodology of organizing distance education. Organization of on-line lectures, off-line consultations.

II . 2 . Distribution of lecture topics

No	topics	Hour
	2 - Semester	
1	Special subjects and their peculiarities.	2
2	Teaching process in higher education as a whole system.	2
3	Educational-normative documents of higher education teacher.	2
4	Content of higher education	2
5	Forms, methods and means of teaching special subjects	2
6	Non-auditory forms of teaching in higher education	2
7	System of assessment of students' knowledge, knowledge and skills in the process of teaching special subjects.	2
8	Use of pedagogical technologies in the process of teaching special subjects in higher education.	4

	9	Use of information technologies in the process of teaching special subjects.	4
		Total:	**22**

III. Practical training

1- Practical training . Special subjects and their peculiarities.

The role of pedagogy in the system of special subjects. Innovative approaches to the teaching of pedagogical subjects. Issues of interdisciplinary integration in the teaching of special subjects.

2- Practical training . Teaching in higher education process as a whole system.

Analysis of concepts of holistic pedagogical process, educational process, systematic approach. Pedagogical axiom. A systematic approach to teaching professional subjects. The personality of the pedagogue and his methodological competence in teaching special subjects. Determination of educational (educational) goals. Assessment of the achievement of educational goals. Stages, laws and principles of educational process design. Acquaint students with the rules of designing and planning the educational process

3- Practical training . Educational-normative documents of higher education teacher.

The personality of the teacher and his professional competence. Innovative competence of the teacher. Requirements for the creation of educational and normative documents, educational and methodological complexes, educational technologies, educational literature. Teacher's personal work plans, calendar thematic plans. The procedure for keeping journals of the group and professor.

4- Practical training . Content of higher education

Field orientation in determining the content of special subject teaching. Principles of determining the content of special education. Unity of teaching purpose and content. Ability to ensure mastery of special subject teaching content. Learning object, mastery object and learning result.

5- Practical training . Forms, methods and means of teaching special subjects

Forms of teaching specialized subjects in higher education. Formal, informal and virtual form of education. Distance forms of teaching special subjects. Forms of teaching special subjects : lecture, practical, seminar, laboratory, independent study. Special science teaching methods: traditional and innovative series. Teaching tools: graphic organizers, teaching aids, handouts.

6- Practical training . Teaching in higher education from the audience except forms

The role of independent education in strengthening the results of special education in higher education. Content of coursework in special subjects, didactic requirements for its preparation and formalization. Requirements for completion of graduation qualification work, organizational and scientific-methodological support, method of organizing and conducting educational and professional pedagogical practice in special subjects, consultation hours.

7- Practical training . Special sciences teaching in the process of students knowledge, Don't worry and qualifications evaluation system.

Peculiarities of evaluating the system of students' knowledge, knowledge and skills in the process of teaching special subjects. Methodology of organization of supervision, evaluation of students and use of international evaluation programs in the process of teaching special subjects. Pedagogical qualimetry.

8- Practical training . Use of pedagogical technologies in the process of teaching special subjects in higher education.

The general nature of educational and educational technologies. Elements of educational

technology pedagogical system. Conditions for organizing the educational process and the functional structure of educational technology. Types of pedagogical technology used in teaching special subjects: person-oriented educational technologies: cooperative pedagogy, problematic, interactive, game, differentiated, developmental educational technologies. Methodology of using pedagogical technologies in the process of teaching special subjects.

9- Practical training . Special sciences teaching in the process information from technologies use

Information and communication technologies in education. Methodology of using information and communication technologies in the teaching of specialized subjects. Presentation, electronic textbook creation technology. Methodology of organizing distance education. Organization of on-line lectures, off-line consultations.

III . 2 . Distribution of practical training topics

No	**Topics of practical training**	**Hour**
	1- Semester	
1	Special subjects and their peculiarities.	2
2	Teaching process in higher education as a whole system.	2
3	Educational-normative documents of higher education teacher.	2
4	Content of higher education	2
5	Forms, methods and means of teaching special subjects	2
6	Non-auditory forms of teaching in higher education	2
7	System of assessment of students' knowledge, knowledge and skills in the process of teaching special subjects.	2
8	pedagogical technologies in the process of teaching special subjects in higher education .	2
9	Use of information technologies in the process of teaching special subjects.	4
	Total:	**20**

IV. Independent education and independent work

1st semester

No	**Independent study topics**	
1	The process of teaching special subjects as a whole system.	
2	Normative documents clarifying the content of special science.	
3	Methods used in teaching special subjects.	
4	Forms of teaching special subjects.	
5	Assessment of knowledge, skills and qualifications of students in the process of teaching special subjects.	
6	Pedagogical creativity is a factor of educational efficiency.	
7	Use of fiction in teaching pedagogical subjects.	
8	Pedagogical process technology according to SD Shevchenko.	
9	Person-oriented educational technology.	
10	Components of cooperative pedagogy.	
11	A. Amonashvili's personal-humanitarian approach technology.	
12	Technology to accelerate education.	
13	Peculiarities of basic signal content. (VFShatalov).	
14	Stages of F. Shatalov's methodology: learning the theory in the classroom; independent work at home; initial repetition; oral presentation based on a basic outline; repeat a second time; monitoring and evaluation.	

	15	Problem-based learning is a developmental educational technology.	
	16	The main signs of a learning problem.	
	17	Stages of personal exploratory cognitive activity.	
	18	Conditions for organization of problematic education.	
	19	Technology of business games	
	20	Pedagogical games and types of communication. The essence of the business game	

V. Results of science education (competencies to be formed)

As a result of mastering the subject, the student:

- laws and principles of teaching special subjects;
- criteria for selection of the educational content of special subjects;
- methods and means of teaching special subjects;
- organizational forms of special education;
- information technologies of special subject education;
- special science teaching technologies;
- educational normative documents and methodical works of a teacher of a specialty subject, as well as planning, organization and training methodology;
- modern requirements for the organization of the educational process;
- the personality of the learner, the manifestation of personal qualities during the educational process;
- classification and main aspects of pedagogical technologies and pedagogical skills;
- to have knowledge about the technological process of education;
- the structure, legality and principles of the special science education process; the tasks of the professor-teacher in the process of teaching special subjects and the methods and means of organizing the learning and learning activities of students, attracting the attention of students and increasing the effectiveness of training, forms of teaching special subjects (lecture, seminar, practical, laboratory, independent education, course work, graduation qualification work, training practice, qualification practice) and the methods of organization and conduct, types of diagnosis of the knowledge, skills and abilities of students in the process of teaching special subjects , forms and methods, ***to have the imagination and knowledge*** of using multimedia and interactive educational technologies of special subject teaching ;
- development of didactic support of special subject, preparation of training programs, development of teaching-methodical complexes of special subject, establishment of rating system in the process of teaching special subject, preparation of training plan and lecture in teaching special subject preparation of the text; ***must have the ability*** to conduct open training and formalize documents, plan the organization of educational work by year, semester, lead forms of work outside the auditorium, use information technologies and interactive technologies in the teaching process .

VI. Educational technologies and methods

- lectures;
- interactive case studies;
- seminars (logical thinking, quick questions and answers);
- work in groups;
- individual projects
- projects for teamwork and protection

VII. Students to receive loans

Credits allocated to science are provided to students in case of positive results in each semester.

Intermediate (ON) and final (YaN) control types are used to assess students' knowledge of science. Evaluation by control types: 5 - "excellent", 4 - "good", 3 - "satisfactory", 2 -

	"unsatisfactory" assessment criteria. Midterm control is conducted in the form of written work once in the academic semester . regularly evaluated and graded on each subject in practical (seminar) classes . In this case, the student's timely and complete completion of practical (seminar) training and independent educational tasks, and his activity in training are taken into account. In addition, the grades received for practical (seminar) training and independent educational tasks are taken into account in the assessment of the type of interim control. In this case, the average of the grades obtained during each intermediate control type **is re-averaged with the grade obtained from the intermediate control type** . The grade obtained from the intermediate controls is recorded in the record as **the result of the intermediate control** . The final control type is conducted at the end of the semester in the form of written work according to the approved schedule . In intermediate (ON) and final (YaN) control types : A student makes independent conclusions and decisions, can think creatively, observes independently, can apply the acquired knowledge in practice, understands the essence of science (topic), knows, can express, tell, and is considered to have an idea about science (topic) - **5 (excellent) grades** ; When the student conducts independent observation, can apply the acquired knowledge in practice, understands the essence of the science (subject), knows, can express, tell and has an idea about the science (subject) - **4 (good) grade** ; When the student is able to apply the acquired knowledge in practice, understands the essence of science (topic), knows, can express, tell and has an idea about science (topic) - **3 (satisfactory) grade** ; When it is considered that the student has not mastered the science program, does not understand the essence of the science (topic) and does not have an idea about the science (topic), he is evaluated with **a grade of 2 (unsatisfactory)** .
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Developed and approved by Namangan State University

- It was discussed and recommended for approval at the meeting of the " Economics " department in "____" _____, 2023.

- It was approved and recommended for approval at the meeting of the " Economics " faculty council in 2023, "____" _____.

- NamDU curriculum was discussed and approved at the ___ meeting of the Council of 2023, "____" _____ .

17. Reviewers:

18. K.Sirojiddinov - head of the "Economics" department of NamSU, associate professor, associate professor

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