MINISTRY OF EDUCATION OF THE REPUBLIC OF BELARUS
Belarusian National Technical University

Department "Psychology"
Department "Foreign Languages"

T. V. Shershniova
O. V. Veremeychik

PEDAGOGY AND PSYCHOLOGY OF HIGHER EDUCATION

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and technologies as a handbook
for sudents receiving advanced higher education in the specialty
7-06-0714-02 "Innovative technologies in mechanical engineering"

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Department of General and Organizational Psychology
of the Institute of Psychology of the Belarusian State
Pedagogical University named after Maxim Tank
(Head of the Department, PhD in Psychology *O. K. Voitko*);
Professor of the Department of Psychology and Pedagogy
of the Belarusian State University of Culture and Arts,
PhD in Psychology, Associate Professor *G. L. Speranskaya*

Shershniova, T. V.

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A handbook contains a summary of the course of lectures and practical classes on the discipline "Pedagogy and psychology of higher education" in English. The handbook also considers main psychological, pedagogical and acmeological problems of higher education and modern approaches to their solution.

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INTRODUCTION

The need to update educational strategies and concepts is caused by the changing role of education in the modern dynamic world, in which it becomes the most important mechanism for the development of the individual, society and civilization as a whole. The need to improve the quality of higher education has led to the transition of higher education institutions to a system of multi-stage training of specialists, which involves updating the structure, content and technologies of the educational process in accordance with global educational trends. As a result, the educational process at universities has now become more complex in terms of its goals, objectives, intensity and content. This requires a deep psychological understanding of the laws of educational activity, principles and methods of teaching and upbringing, the formation of personality and collective of students.

One of the main conditions for improving the educational sphere of society is the availability of highly qualified teaching staff for higher educational institutions. In this regard, the relevance of studying by undergraduates of all specialties of the discipline "Pedagogy and Psychology of Higher Education" becomes obvious, the main purpose of mastering which is to form the readiness of undergraduates to carry out professional and pedagogical activities at the university at a high scientific and methodological level, mastering educational innovations and conducting scientific research in the field of education.

The tasks of studying the discipline "Pedagogy and Psychology of Higher Education" are determined by the requirements for undergraduates to master the generalized knowledge and skills underlying psychological and pedagogical competencies and include:

1) competencies related to the study and consideration of age, gender and psychological characteristics of students, mechanisms of their motivation;

2) competencies aimed at the organization and implementation of the educational process, activation of independent work of students;

3) competencies that ensure the organization of the students' learning process;

4) competencies that ensure the mastery of effective pedagogical technologies and the improvement of educational and methodological

support of the educational process (including on the basis of computer and multimedia tools);

5) competencies aimed at the productive solution of communicative tasks of pedagogical activity;

6) competencies related to pedagogical monitoring;

7) competencies that determine the development of pedagogical innovations, conducting scientific research in the field of pedagogy and psychology of education;

8) competencies of continuous professional self-education and personal self-improvement.

The formation of these competencies is ensured by the development of the following generalized psychological and pedagogical knowledge and skills.

A master's student should know:

– the conceptual apparatus, methodological foundations and methods of pedagogy and psychology of higher education;

– directions, patterns and principles of development of the higher education system;

– advanced pedagogical experience and innovations in the field of higher education;

– the essence of pedagogical activity in higher education and the psychological foundations of the organization of higher education;

– pedagogical skills and creativity of the teacher;

– individual characteristics of students and methods of their diagnosis, methods and conditions of motivation and adaptation of students;

– psychological and pedagogical features of interaction and cooperation between teachers and students, pedagogical management of the activities of student collectives and self-government bodies;

– approaches and principles of selection and design of the content of higher education;

– the main forms and means of organizing and implementing the processes of teaching and educational work, activating the students' independent work, conducting research work of students;

– effective educational technologies, approaches and principles of development and application of modern educational and methodological support of the educational process (including on the basis of electronic learning tools);

– fundamentals of pedagogical management and monitoring.

A master's student should be able to:

– design the content of training, establish interdisciplinary connections;

– use and improve methods, techniques, technologies of teaching and educational work of students;

– design and organize various forms of training and educational activities, extracurricular independent work and research activities of students;

– organize the educational process using pedagogical technologies;

– innovation and consideration of personal characteristics of students and their quality management;

– establish pedagogically acceptable relations with all participants in the educational process;

– plan and conduct scientific research in the field of pedagogy and psychology of higher education.

The content of the handbook on the discipline "Pedagogy and Psychology of Higher Education" is developed in accordance with the above-mentioned psychological and pedagogical competencies and their corresponding generalized knowledge and skills.

Authors

TOPIC 1. INTRODUCTION TO THE COURSE "PEDAGOGY OF HIGHER EDUCATION"

1.1. Pedagogy of higher education (PHE) in the system of pedagogical sciences. The subject, tasks and main categories of (PHE).

1.2. Features of the development of higher education in modern environment.

1.3. Methodological foundations of research in pedagogy of higher education. Types of research and its methods.

1.4. Practical class.

1.1. Pedagogy of higher education (PHE) in the system of pedagogical sciences. The subject, tasks and main categories of PHE

Pedagogy is one of the oldest sciences about man and is essentially inseparable from the development of society. The social progress of mankind became possible only because each new generation of people mastered the cultural and historical experience of their ancestors and, enriching it, passed it on to their descendants in a more developed form. The more developed and complicated the production became, the more scientific knowledge was accumulated and the more important the special training of the younger generation became. Learning and education (upbringing) have become an objective need of society and have become an important prerequisite for its development. At a certain stage of the formation of human society (the late period of the slave system), when production and science have reached a certain level of development, education turns into a social phenomenon and acquires a special social function (special educational institutions arise).

The word "*pedagogy*" is derived from French and Latin adaptations of the Greek word for "boy" and "leader", meaning a man having oversight of a child. Defined in this way, pedagogy is seen as the art and science of teaching children, that is, to educate them, to train them, to guide their spiritual and physical development

Thus, the process of transferring cultural and historical experience has become necessary and purposeful. It was carried out during the interaction between the elder the younger, the teacher and the trainee, the experienced and the less experienced. This interaction is called the

pedagogical process, which is the **subject of pedagogy**, and which ensures the development of a person throughout his life.

The pedagogical process is a specially organized interaction between the teacher and the student in order to transfer and master the cultural and historical experience necessary for independent life and work in society.

The object of pedagogy is a person who develops through a specially organized process of education.

Pedagogy is a science that studies the essence, laws, principles, methods and forms of organization of the pedagogical process as a factor and means of human development throughout his life.

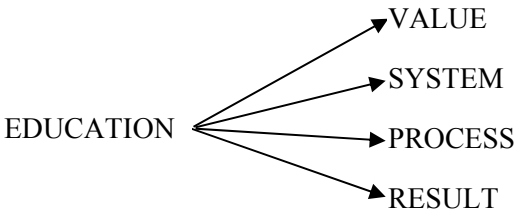
Pedagogy belongs to the category of human sciences and is integrally connected with philosophy, sociology, medicine, ethics, etc. Everyone needs pedagogical knowledge. Every person purposefully or spontaneously relies on this knowledge, educating their children, guiding other people.

In any science, categories play a leading role, they permeate all scientific knowledge and, as it were, link it into an integral system. The categories include the most capacious and general concepts that reflect the essence of science.

The main *categories* of pedagogy are the following:

1. Education. Education is understood as a process and result of mastering the experience of generations by a person in the form of a system of knowledge, skills, abilities, methods of creative activity and relationships.

There are four main aspects of the concept of education:



The value of education consists in the unity of state, social and personal components. Indeed, the economic, scientific, and cultural potential of any country largely depends on the state and development of the national education system. But at the same time, the state and public

significance of education is inseparable from its personal value. Only a highly qualified and active person is able to find a challenging highly-paid job and ensure a decent life in a competitive market environment.

Education as *a system* is a specially organized set of educational, cultural and educational institutions, institutions for advanced training and retraining of personnel. It carries out the educational process in accordance with the standards, curricula and plans with the help of specially trained teachers. All educational institutions in the state constitute a single education system.

In accordance with Article 11 of the Code of the Republic of Belarus on Education, education is divided into **basic, additional and special**.

Basic education in the Republic of Belarus includes the following levels: preschool education; general secondary education; vocational education; secondary special education; higher education; science-oriented education.

In education as a *process* of transferring and assimilating knowledge, skills and abilities and the formation of a versatile personality, two main interrelated structural components are distinguished: the learning (training) process and the education (upbringing) process.

Education as *a result* is evaluated at the individual-personal and public-state levels. At the individual and personal level, the result of education is determined by the student's achievement of state-defined educational levels (educational qualifications) and the certification of this by an appropriate document (a diploma of completion of a vocational, specialized secondary, higher educational institution, etc.). At the state level, the result of education (the effectiveness of the functioning of the education system) is evaluated indirectly on the basis of the economic, scientific, technical and cultural progress of the country.

2. Learning (Training). Learning (training) is understood as a specially organized process of purposeful interaction between a teacher and students, as a result of which the assimilation of a certain system of knowledge, skills, abilities, ways of thinking and activity is ensured.

At the same time, *the teacher*:

1) teaches, i. e. purposefully transmits knowledge, experience, methods of activity, the basics of culture;

2) manages the process of mastering knowledge;

3) creates conditions for personal development.

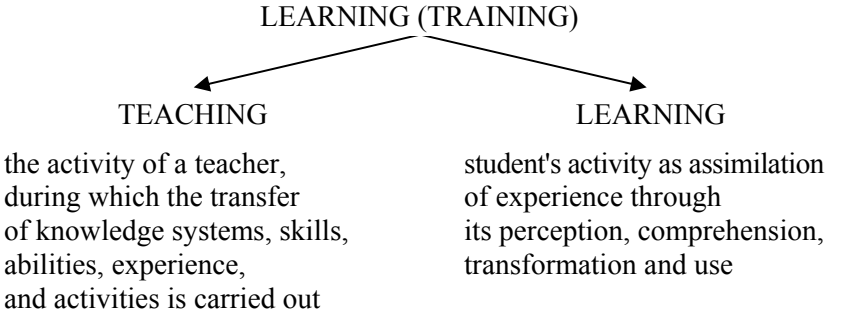
In turn, *the student*:

1) learns, i. e. masters the educational material and performs various exercises and tasks;

2) performs independent observations and performs mental operations (comparison, analysis, generalization);

3) independently searches for new information.

The training process comprises 2 parts:



3. Education (upbringing). Education in a broad sense is a social phenomenon, understood as an impact on the individual and society as a whole. Education as a social phenomenon is the transfer of cultural and historical experience to the younger generation in order to prepare it for independent social life and industrial work.

Education in the narrow sense is a purposeful activity designed to form a system of personal qualities, views and beliefs.

4. Development. Development is an objective process of internal, consistent quantitative and qualitative changes in the physical and spiritual forces of a person.

Pedagogy makes extensive use of the international scientific concepts of "formation" and "development". Formation is the process of a person's becoming as a social being under the influence of all factors without exception: environmental, social, economic, ideological, psychological, etc. Education (upbringing) is one of the most important, but not the only, factor in the formation of a personality. Formation implies a certain completeness of the human personality, achieving a level of maturity, stability.

With the accumulation of scientific knowledge and their specialization, differentiation took place within pedagogy, new branches were separated

from general science, which acquired the status of independent pedagogical sciences. Modern pedagogy is a very extensive system of scientific disciplines and branches that are at different stages of development and are connected to each other in a certain way.

The specific tasks of higher education are designed to solve the relatively young branch of pedagogical education – the pedagogy of higher education. The theory of higher education (pedagogy of higher education) is intended to put on a scientific basis both the solution of the problem of higher education for specific specialties and the mastery of higher education teachers in their professional activities of managing the process of mastering this content. **Pedagogy of higher education (PHE)** is a science that scientifically substantiates the requirements for the modern educational process and identifies its patterns, transfer teaching from the level of information to the level of development management, the professional development of future specialists.

Higher school pedagogy scientifically substantiates the requirements for conducting each lesson, for the teacher to choose the methods and tools of teaching, taking into account the specifics of the goals of higher education. In other words, university pedagogy solves the problems of higher education not only at the theoretical and methodological level, but also constructs specific tools with which the implementation of the content and goals of higher education is achieved.

The system of pedagogical knowledge includes two independent scientific fields:

1. Didactics.
2. Theory and methodology of education (upbringing).

The subject of PHE is the processes of education and professional training of specialists in the university environment, the identification of patterns of this process.

The subject field of PHE includes:

– development of the essence and content of the process of learning (training) and educating the student's personality in higher school;

– formation of a model of a specialist with higher education;

– research of methods, ways of enhancing the educational and cognitive activity of students;

– development of organizational forms and tools of learning (training) and educating (upbringing) at higher school;

– formation of principles for the development of methods of academic disciplines of higher education;

– development of methods of training and retraining of teachers;

– development of methods for assessing students' knowledge and professional skills of teachers, etc.

The main **tasks** of PHE are the following:

1. Development of conceptual foundations of continuous professional education, all its links, vocational (professional) guidance (pre-university training), university training, postgraduate education.

2. Researching the issues of professional training of future specialists in various types of educational institutions according to the traditional and multi-level system, developing the theory and methods of professional training.

3. Researching the essence and patterns of the process of educating (upbringing) student youth, the personality of a future specialist, and on this basis, the development of methodological recommendations.

4. Studying the content and patterns of the learning (training) process in higher school, its various types, and on this basis, the development of methodological recommendations and new progressive pedagogical technologies.

5. Theoretical substantiation and development of models for a specialist of the XXI century.

6. Researching the activities of public organizations and formations, their role in the professional training and education (upbringing) of future specialists, in the development of student self-government, identifying ways to improve the efficiency of their work.

7. Studying and analyzing the activities of the teaching staff of universities, identifying the most productive author's methods and pedagogical teaching technologies, developing professional characteristics and requirements for a university teacher.

8. Studying the issues of management in the educational (upbringing) process at university at different levels, determining the most favorable forms and methods of activity of administrative structures.

A category is a general, fundamental concept that expresses the most essential properties, connections, relationships of a particular phenomenon of real reality.

The **categories of pedagogy** in higher education are divided into 3 types:

1) methodological categories:	– pedagogical theory; – pedagogical concept; – pedagogical idea; – pedagogical pattern; – pedagogical principle;
2) procedural categories:	– learning (training), education (upbringing), development; – formation of personality; – educational process; – learning (training), education (upbringing) process;
3) essential categories:	– professional profile of a specialist; – goals, tasks and content of learning (training) and education (upbringing); – teacher and student activities; – planning of educational work; – forms, methods and tools of learning (training) and education (upbringing); – management of the educational process; – independent work of students, research work of students.

1.2. Features of the development of higher education in modern environment

Higher education is the main factor of economic and social progress in the society. Especially its role is increasing in modern conditions (environment). The transformation of the socio-economic relations of our society, the formation of the knowledge economy, the innovative development of all sectors of the national economy determines the formation of specialists of a new formation in higher education – innovation-oriented specialists who, in modern conditions, are able to adequately respond to those systemic challenges that have arisen in recent decades and reflect both global trends and internal barriers to the country's development. At the same time, the dominance of the information-knowledge approach in the training of specialists in higher

education is the main reason for the inability of university graduates to predict the situation, to navigate in conditions that allow for fundamental uncertainty. As a result, society is often not ready to predict and respond in a timely manner to emerging problems – economic, energy, environmental, social, etc. All this requires fundamental changes in the system of higher professional education aimed at ensuring its compliance with both the requirements of the innovative economy and the needs of modern society.

Based on the new socio-economic realities, *the educational process at higher school* should currently be characterized by the following main *properties*: humanization, humanitarization, differentiation, diversification, multivariance, multilevel, computerization, informatization, individualization, continuity.

Humanization requires a change in relations in the "teacher-student" system – the establishment of subject-subject interactions (mutual respect of students and teachers, based on respect for the rights of each person; on the preservation and strengthening of their health, self-esteem and development of personal potential). Such an educational process guarantees students the right to choose an individual path of development.

Humanitarization of the educational process is an orientation towards mastering the content of education, regardless of its level and type, which allows you to readily solve the main social problems for the benefit and in the name of a person; freely communicate with people of different nationalities, professions and specialties; to know your native language, history and culture well; be fluent in foreign languages; be an economically and legally literate person.

The differentiation of the educational process is associated with the orientation of educational programs based on the aptitudes, abilities and interests of students to achieve the objectives of education and development in accordance with their educational resources.

Multivariance means creating conditions of choice in the educational process and giving each subject a chance to succeed, encouraging students to make independent choices and make responsible decisions, ensuring the development of alternative and independent thinking. In practice, multivariance is manifested through the ability to choose the pace of learning, achieve different levels of education, choose the type of educational institution, as well as the differentiation of learning

conditions depending on the individual characteristics of students (in a classroom, group, individually, using a computer, etc.), etc.

Multilevel is the organization of a multi-stage educational process that provides the opportunity to achieve at each stage of education the level of education that corresponds to the capabilities and interests of a person. Each level is a period that has its own goals, terms of study and its own characteristics. The moment of completion of training at each stage is the qualitative completion of education. For example, the training of a specialist at a university (4 years of study), the preparation of a master's degree (1–2 years of study) characterize the features of the educational process at each level of education.

The informatization of the educational process is associated with the wide and increasingly widespread use of computers and information technologies in the process of human education. Informatization of education has become the most widespread all over the world in the last decade. This is due to the accessibility for the education system and the relative ease of use of various types of modern video, audio equipment and computers.

Individualization of the educational process involves the construction of this process taking into account the individual characteristics of students in all forms of interaction with them in the process of learning (training) and education (upbringing).

The continuity of the educational process implies constant education and self-education of a person throughout his life.

1.3. Methodological foundations of research in pedagogy of higher education. Types of research and its methods

Methodology is a system of principles and methods of organizing and constructing theoretical and practical activities. Scientific methodology characterizes the components of research: tasks, object, subject, set of tools, and also forms the concept of the structure and sequence of solving various research problems.

Methodology in pedagogy is a set of theoretical provisions on pedagogical cognition and transformation of reality.

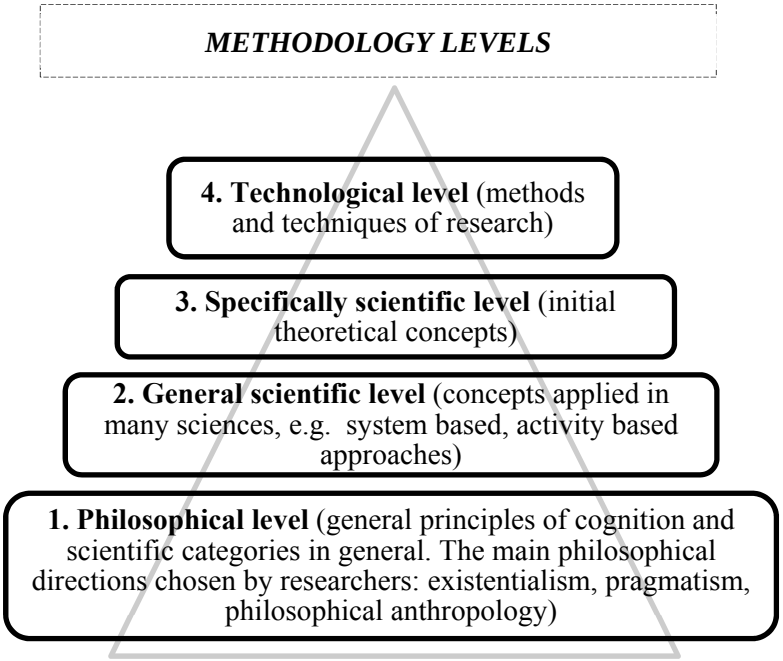


Fig. 1.1. Methodology levels in pedagogy

The methodological basis of pedagogy is a system of fundamental philosophically meaningful positions that form the core of the ideas of science and influence the course of its development.

The key methodological provisions of PHE include the following:

1. Pedagogical research should be considered in a temporary context. The historical approach makes it possible to determine their relevance, timeliness and necessity for the development of higher education.

2. The systemic and structural approach to the pedagogical reality of higher school contributes to a broad contextual perception and analysis of the educational process, creates the prerequisites (preconditions) for obtaining an objective result.

3. Professional training in a higher educational institution is a system-forming element of the entire process of the formation of a specialist's personality.

4. The source of the student's personality development is internal and external factors: heredity, environment, upbringing, professional training, self-upbringing, self-education.

5. Cognition, activity, and communication play a crucial role in the professional development of a student's personality.

6. The productivity of the process of education (upbringing) and professional training of a student is determined by his activity, which is especially important for self-upbringing and self-education.

7. Student youth must be studied in the dynamics of their development, to analyze constant changes in their views, beliefs, ideals, etc.

8. In the formation of the worldview position, value orientations of the motivational sphere of the future specialist, harmonization of personal and public interests, national and universal values is of great importance.

9. The student group becomes the most favorable environment for the learning (training), education (upbringing) and formation of the student's personality.

10. An important potential for the development of higher school pedagogy is practice, the role of which is played by the entire life of the university; there is a complex relationship and interdependence between pedagogical theory and practice.

Pedagogical research is conducted to understand the objective pedagogical reality, explain and predict its development. **Pedagogical research** is the process and result of scientific activity aimed at obtaining new knowledge about the laws of teaching, learning (training), education (upbringing) and education, their structure and mechanisms, content, principles and technologies.

Certain scientific methods are used in pedagogical research.

Methods of pedagogical research are ways of obtaining scientific information in order to establish regular connections, relationships, dependencies and build scientific theories.

Currently, PHE has a system of various methods that can be divided into 3 groups:

1) theoretical methods:
– concept analysis;
– hypothesis building;
– pedagogical modeling;
– analysis of scientific literature;
– analysis of university documentation;
– analysis of the products of the activities of higher school subjects;
– study and analysis of pedagogical experience;

2) experimental methods (pedagogical experiment and its stages):
– pilot;
– forming;
– control;

3) empirical methods:
– observation;
– conversation;
– survey;
– testing;
– rating;
– methods of mathematical statistics;
– graphical methods.

The choice of certain methods, their combination, and the creation of a research methodology are determined by the problem, goal, object, and nature of the research itself. Each pedagogical research has its own structure (stages).

Stage 1. General acquaintance with the problem of research, its development by pedagogical and other sciences, determination of the boundaries of research, defining the boundaries of research, identifying the relevance of the problem for theory and practice.

Stage 2. Determination of the goals and tasks of the research.

Stage 3. Establishment of the research hypothesis. Development of the research methodology.

Stage 4. Development of the program of 3 stages of the pedagogical experiment: pilot, forming and control.

Stage 5. Conducting 3 stages of experimental work, testing the hypothesis.

Stage 6. Processing, generalization and synthesis of the obtained experimental data, formulation of conclusions, recommendations.

Research of a theoretical nature does not have an experimental stage. It is important that any research contributes to the development of higher school pedagogy and is necessary for educational practice.

1.4. Practical class

Questions for discussion

1. Pedagogy of higher education (PHE) in the system of pedagogical sciences.

2. The subject and main categories of PHE.

3. Sources of PHE: normative-legal, educational-methodical, documentary.

4. Methodological foundations of (PHE). Organization of scientific and pedagogical research in the field of higher education.

5. Methods of pedagogical research.

Practical tasks

1. Find the information on the system of pedagogical sciences and the relation of pedagogy with other sciences and fill in the tables and the figure below.

Table 1.1

The relation of pedagogy with other sciences

Branches of pedagogy	The subject of the study
1	2
General pedagogy	
History of pedagogy	
Social pedagogy	
Comparative pedagogy	
Age pedagogy	
Branch pedagogy	Studies the problems of professional education (the laws of special training of people for certain types of activities: pedagogical, engineering, military, legal, sports, etc.). It involves: – *pedagogy of vocational and technical education* (studies the laws of training highly qualified workers); – *pedagogy of secondary special education*; – *higher school pedagogy*;

Table 1.1 (end)

1	2
	– *industrial pedagogy* (studies the patterns of training of employees, improving their qualifications and retraining) – *military pedagogy*; – *correctional labor pedagogy* (pedagogy of penitentiary institutions)
Special pedagogy (correctional pedagogy, (defectology)	Science about the peculiarities of development and patterns of learning (training) and education (upbringing) of abnormal children with physical and mental disabilities: – *oligophrenopedagogy* (training and education of mentally retarded children and children with mental disabilities); – *surdopedagogy* (sign language pedagogy) (work with hearing impaired children); – *typhlopedagogy* (work with visually impaired and blind children); – *speech therapy* (work to correct speech defects)
Therapeutic pedagogy	A system of medical and pedagogical measures aimed at correcting the defect and developing abnormal children in medical institutions
Prenatal pedagogy	Studies the management of various factors affecting the intrauterine development of the fetus. It arose on the basis of the recognition of the fact that the external environment affects the developing fetus (prenatal development of the psyche)

Pedagogy of higher education as a science about the laws of teaching and educating students cannot successfully develop in isolation from other human sciences (tabl. 1.2, fig. 1.2). Pedagogy of higher education is influenced by other sciences, borrowing from them knowledge of man and society, ways of scientific knowledge, adapting to his own needs scientific approaches and theories developed by other sciences.

Table 1.2

The relation of pedagogy of higher education with human sciences

Science	The essence of relations of pedagogy of higher education with human sciences
1	2
	The main pedagogical concepts based on philosophical trends are: – *pragmatism* (a philosophical and pedagogical direction that suggests bringing education closer to life, achieving the goals of education in practice); – *neo-pragmatism* (essence – self-affirmation of the individual); – *neo-positivism* (a philosophical and pedagogical direction that tries to comprehend the complex of phenomena caused by the scientific and technical revolution, the task of education (upbringing) is the formation of a rationally thinking person); – *existentialism* (a philosophical trend that recognizes a person as the highest value in the world, is characterized by distrust of the goals and possibilities of education, religious implications); – *neo-thomism* (a religious philosophical teaching, according to which education should be based on the priority of the spiritual principle); – *behaviorism* (considers human behavior as a controlled process). *The methodological (guiding) function of _____ in relation to pedagogy* is manifested in the fact that it develops a system of general principles and methods of scientific cognition
	Interacting with _____, pedagogy takes into account the influence of the social environment on a person and the relationships between people. As a result of the integration of these sciences, _____ pedagogy emerged

Table 1.2 (end)

1	2
Ethics	
	The relationship with _____ involves solving the problem of forming students' sense of beauty, aesthetic attitude to reality
Medicine	This is the basis for understanding the biological essence of a person, the peculiarities of the development of the body at each age stage
Psychology	
Cybernetics	Pedagogy as a management science is associated with cybernetics, which studies the laws of optimal control of complex dynamic processes
Economics	Pedagogy is closely connected with economics, in particular, with the economy of education, the data of which are necessary for solving such pedagogical problems as: determining the cost of training due to the rise in the cost of living; the cost of training in various types of educational institutions; the cost of teaching staff, construction, equipment, visual aids, etc.
History	

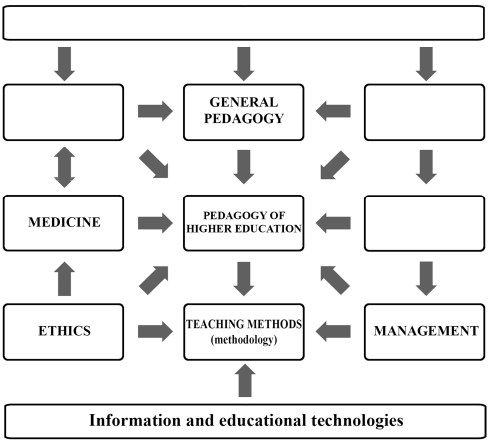


Fig. 1.2. Relations of pedagogy of higher education with human sciences

Thus, there are 4 main forms of relation between pedagogy of higher education and other sciences:

– the use of the main ideas and theoretical positions of other sciences by pedagogy (philosophical ideas play a guiding role in the process of developing pedagogical theory);

– creative borrowing of research methods of other sciences: psychology, sociology, mathematics (enriches pedagogy with statistical research methods);

– the use of specific research results of psychology, physiology of higher nervous activity, sociology, and other sciences;

– the participation of pedagogy of higher education in complex human research.

2. Model 2–3 variants of a forming experiment in the pedagogical activity of a teacher of special disciplines (according to the profile of your specialty).

3. Complete a survey "Career anchors" (E. Shane, translation and adaptation by V. A. Chiker, V. E. Vinokurov) in order to study the career orientations of the individual.

A survey "Career anchors"

Instruction. How important is each of the following statements to you?

Answer options:

1 – absolutely not important; 2, 3, 4, 5, 6, 7, 8, 9, 10 – extremely important.

1. To build your career within a specific scientific or technical field.
2. To monitor and control people, to influence them at all levels.
3. To be able to do everything in your own way and not be constrained by the rules of any organization.
4. To have a permanent job with a guaranteed salary and social security.
5. To use your ability to communicate for the benefit of people, to help others.
6. To work on problems that seem almost unsolvable.
7. To lead such a lifestyle that balances family and career interests.
8. To create and build something that will be entirely my work or idea.
9. To continue to work in my specialty than to get a higher position not related to my specialty.

10. To be the first leader in the organization.

11. To have a job that is not related to the regime or other organizational restrictions.

12. To work in an organization that will provide me with stability for a long period of time.

13. To use your skills and abilities to make the world a better place.

14. To compete with others and win.

15. To build a career that will allow me not to change my lifestyle.

16. To create a new commercial enterprise (business venture).

17. To devote (dedicate) your whole life to your chosen profession.

18. To take a high managerial position.

19. To have a job that represents the maximum freedom and autonomy in choosing the nature of classes, the time of completion, etc.

20. To stay in one place of residence than move due to promotion.

21. To be able to use your skills and talents to serve an important purpose.

How much do you agree with each of the following statements?

Answer options:

1 – completely disagree; 2, 3, 4, 5, 6, 7, 8, 9, 10 – completely agree.

22. The only real goal of my career is to find and solve difficult problems, regardless of the field in which they arose.

23. I always strive to pay equal attention to my family and my career.

24. I am always looking for ideas that will give me the opportunity to start and build my own business.

25. I will accept a managerial position only if it is within the scope of my professional competence.

26. I would like to reach a position in the organization that would allow me to oversee the work of others and integrate their activities.

27. In my professional activity, I was most concerned about my freedom and autonomy.

28. It is more important for me to stay at my current place of residence than to get a promotion or a new job in another activity.

29. I have always been looking for a job where I could benefit others.

30. Competition and winning are the most important and exciting aspects of my career.

31. A career makes sense only if it allows me to lead a life that I like.

32. Entrepreneurship is a central part of my career.

33. I would rather leave the organization than engage in work that is not related to my profession.

34. I will consider that I have achieved success in my career only when I become a high-level manager in a respectable organization.

35. I don't want to be embarrassed by any organization or the business world.

36. I would prefer to work in an organization that provides a long-term contract.

37. I would like to devote my career to achieving an important and rewarding goal.

38. I feel successful only when I am constantly involved in solving difficult problems or in a competitive situation.

39. Choosing and maintaining a certain lifestyle is more important than pursuing career success.

40. I have always wanted to start and build my own business.

41. I prefer work that is not related to travel.

Processing of results

The total score for each scale is calculated and the leading orientations are identified.

The key to the survey

Professional competence: 1, 9, 17, 25, 33.
Management: 2, 10, 18, 26, 34.
Autonomy (independence): 3, 11, 19, 27, 35.
Job stability: 4, 12, 36.
Residence stability: 20, 28, 41.
Service: 5, 13, 21, 29, 37.
Challenge: 6, 14, 22, 30, 38.
Integrating lifestyles: 7, 15, 23, 31, 39.
Entrepreneurship: 8, 16, 24, 32, 40.

A brief description of the value orientations in the career

1. *Professional competence* – To be a professional, a master in his field.

2. *Management* – Manage – people, projects, business processes, etc. The most important thing for them is management: people, projects, any business processes-this generally does not matter in principle. The central concept of their professional development is power, the awareness that key

decision-making depends on them. Moreover, it is not important for them to manage their own project or the whole business, rather, on the contrary, they are more focused on building a career in hired management, but on the condition that significant powers will be delegated to them. A person with such an orientation will consider that he has not reached the goal of his career until he takes a position where he will manage various aspects of the company's activities.

3. *Autonomy (independence)* – The main thing in the work is freedom and independence.

4. *Job stability* – Stable, reliable job for a long time. These people have a need for safety, security, and predictability and will seek permanent employment with a minimum probability of dismissal.

5. *Residence stability* – The main thing is to live in your city (a minimum of moving, business trips). Moving for such people is unacceptable, and even partial business trips are a negative factor for them when considering a job offer.

6. *Service* – To embody their ideals and values in their work. They strive to benefit people, society, it is very important for them to see the concrete fruits of their work, even if they are not expressed in a material equivalent. Service-oriented people are sociable and often conservative. A person with this orientation will not work in an organization that is hostile to his goals and values.

7. *Challenge* – To make the impossible possible, to solve unique tasks. These people consider it a success to overcome insurmountable obstacles, solve unsolvable problems or just win, They are focused on "challenging". They are focused on solving obviously difficult tasks, overcoming obstacles for the sake of winning the competition. Novelty, variety and challenge are of great value to them, and if things go too easy, they get bored.

8. *Integrating lifestyles* – Maintaining harmony between the established personal life and career. They are attracted to career development only if it does not violate their usual lifestyle and environment. It is important for them that everything is balanced: career, family, personal interests, etc. It is clearly not typical for them to sacrifice one thing for the sake of another. Such people usually show conformity in their behavior (the tendency to change their behavior depending on the influence of other people, so that it corresponds to the opinion of others).

9. *Entrepreneurship* – Create new organizations, products, and services. These people like to create new organizations, products or services that can be identified with their efforts. Working for others is not theirs, they are entrepreneurs in spirit, and the goal of their career is to create something new, organize their own business, implement an idea that completely belongs only to them. The top of the career in their understanding is their own business.

TOPIC 2. THE SYSTEM OF HIGHER EDUCATION IN MODERN ENVIRONMENT

2.1. The role of higher education at the present stage of socio-cultural development. Types of higher education.

2.2. Functions of higher education in modern socio-economic environment.

2.3. Development of various types of higher educational establishments. Universities in the higher education system.

2.4. Science-oriented education as a condition for lifelong learning (education).

2.5. Trends in the development of national higher education systems in the countries of Europe and the Commonwealth of Independent States.

2.6. Practical class.

2.1. The role of higher education at the present stage of socio-cultural development. Types of higher education

Modern socio-economic conditions of the development of society (the formation of a post-industrial (information) civilization) impose fundamentally new requirements for the higher education system. *Firstly*, the development of innovative technologies implies the priority development of creative and projective abilities of students. *Secondly*, the information revolution and the transformation of society into an information society dictates the need to form an information culture of students and at the same time requires strengthening the information orientation of the content of education and the widespread introduction of information technologies into the educational process. *Thirdly*, the general environmental crisis poses for education, and especially engineering, the task of changing the general environmental consciousness, educating professional morality and focusing specialists on the development and application of environmentally friendly technologies and industries. *Fourthly*, the lagging behind the development of social consciousness from the rate of development of global problems of mankind requires the formation of planetary thinking among students, which leads to the introduction of such disciplines as system modeling, synergetics, globalistics, prognostics, etc. into the educational process of the university. This will contribute to the formation of a new holistic worldview,

noospheric thinking, new value orientations based on general humanistic dominants, which does not contradict the development of national identity. *Fifthly*, a decrease in the intellectual potential of society requires an increase in the quality of training of specialists, its fundamentalization. *Sixthly*, the solution of the above-mentioned problems is directly related to the strengthening of the educational component of vocational education, spiritual and moral education (upbringing) of the younger generation.

Based on this, currently the goal of higher education is to train specialists who fit in their socio-professional qualities the development of modern society. Higher educational establishments (institutions) are faced with the task of forming a creative, independent, responsible personality, capable of mastering and transforming the material and spiritual world, creating new forms of social life, culture in general.

The analysis of global trends in the development of higher education shows that the distinctive features of its functioning in modern environment (conditions) are the following:

– wide diversification of education that is, multivariance, diversity, multi-model;

– flexibility in the timing of the beginning and completion of higher education;

– transition of higher education to the "lifelong learning" paradigm;

– strengthening the links of higher school with all levels of post-secondary education;

– humanization and humanitarization of higher education;

– strengthening the focus on interdisciplinary, multidisciplinary and transdisciplinary educational programs;

– introduction of modular curricula as an organizational framework for learning (training);

– continuous adaptation of programs to future production needs; increasing the role and level of scientific research in higher education; internalization of higher education;

– development of mobility of students and teaching staff of higher school, etc.

Modern higher education includes the following types (Article 198 of the Code of the Republic of Belarus on Education):

– general higher education in the implementation of the bachelor's degree program aimed at training specialists with the assignment of qualifications and a Bachelor's degree;

– advanced higher education in the implementation of the master's degree program aimed at training specialists with the assignment of a Master's degree;

– special higher education in the implementation of a continuous educational program of higher education aimed at training specialists with the assignment of qualifications and a Master's degree.

General higher education gives the right to continue higher education (obtaining advanced higher education) and employment in the received specialty, assigned qualifications and a Bachelor's degree.

Advanced higher education gives the right to master the content of the educational program of postgraduate studies (adjunct studies) at the level of science-oriented education and employment in the received specialty and awarded the degree of "Master".

Special higher education gives the right to master the content of the educational program of postgraduate studies (adjunct studies) at the level of science-oriented education and employment in the received specialty, assigned qualifications and a Master's degree.

The current system of higher education contributes to the differentiation and individualization of education, expands the capabilities of universities in meeting the educational needs of individuals and society, improves the quality of educational, professional and scientific training of specialists.

2.2. Functions of higher education in modern socio-economic environment

Education, as one of the main social institutions of society, performs very important social functions in the state. **The main social functions of the higher education system** include:

a) *socio-economic*, related to the formation and development of the intellectual, scientific, technical and personnel potential of the society;

b) *socio-political*, the implementation of which makes it possible to ensure the security of society in its broadest sense, social control, social mobility, sustainable development of society, its internationalization and involvement in general civilization processes;

c) *cultural-creative*, aimed at the development of the spiritual life of society, where education plays a decisive role in the formation of personality, the preservation and development of spiritual heritage.

At the same time, it should be emphasized that the interaction and interweaving of the above-mentioned functions tends to further increase. If we consider in more detail the main social functions of the educational system, we can distinguish the following: transfer of accumulated knowledge to the younger generation; ensuring the continuity of social experience; assimilation of the values of the dominant culture; socialization of the individual; promotion of the individual to a higher social status; implementation of a specific investment in the future through education.

One of the main social functions of the higher education system is *to transfer the accumulated knowledge to the younger generation*. It is in the process of education that all the spiritual riches that humanity has developed are transmitted from generation to generation, the assimilation of the results of human cognition by young people, as well as the mastery of labor skills and abilities. Knowledge, skills and abilities can be transferred through the activities of the family, preschool children's institutions, general education schools, in the process of training in vocational (special) educational institutions (primary, secondary special and higher vocational schools), as well as through other types of educational institutions or acquired by an individual independently.

The second important function of the higher education system is that it ensures *the continuity (succession) of social experience*. Social experience is the result of practical and cognitive activity of previous generations. The knowledge, skills and abilities transmitted from generation to generation appear before contemporaries as objectively embodied human efforts, norms, aesthetic tastes, moral values, skill techniques, the translator of which is learning (training) and education (upbringing). The human experience fixed in knowledge, skills and abilities, being carried out in specific actions, remains in the present, but at the same time actualizes the past in itself and contributes to the formation of the future.

The third important function of higher education is the *assimilation of the values of the dominant culture* (cultural function). The French philosopher and sociologist E. Durkheim emphasized that the main function of education is to transmit the values of the dominant culture to the younger generations. Education and culture are concepts that are closely related to each other. The word "culture" (from Lat. cultura) means "cultivation, upbringing, education, development, reverence". The concept of "culture" includes all spheres of a person's spiritual life (his

moral, ethical, aesthetic and physical development, worldview, methods and forms of communication between people). The formation of a person as a specific multidimensional personality is carried out in a certain cultural space. National culture, and, consequently, education as a part of it, act as the basis of his spiritual continuity with previous generations and a connecting bridge with future generations and creates (education) the necessary conditions for his favorable spiritual and physical development, provides a kind of natural "ingrowth" (integration) of a person into the system of spiritual and material values of his people. In this context, education should be based on a national basis, and at the same time, this does not mean its isolation from other cultures. On the contrary, the formation of a young person's personality in modern conditions determines the need for a harmonious combination of elements of national and world culture. This approach is based on the principle of humanity and ensures the integrity of the process of personality formation, creates conditions for the implementation of its potential, the full disclosure of its essence.

The fourth function of higher education is revealed in the process of *socialization of the individual*, accumulation and development of his spiritual, intellectual and social potential. Socialization is a multi-sided process of assimilation by an individual of social experience, a certain system of knowledge, norms, values, patterns of behavior inherent in a certain social group or society as a whole and allowing him to function as an active subject of social relations and activities.

Through the formation of knowledge, attitudes, value orientations, life ideals, norms of behavior that prevail in this society, young people are introduced to the life of society and integrated into the social system. The process of socialization in a general sense can be represented as a process of connecting to the culture of society. At the same time, this process of adaptation to the cultural environment is carried out almost the entire life of the individual. Therefore, socialization can be represented as a process of constant assimilation of social roles and patterns of behavior; mastering forms, values, symbols, norms, traditions, languages, meanings and culture; acquiring one's own socio-cultural experience and personal (social, ethnic, confessional, etc.) identity and achieving the status of an independent and autonomous figure (subject) capable of making responsible decisions concerning his life and interaction with society.

The functioning of the educational system (including higher education) is also a specific *investment in the future*. A certain level of education is not a certain subject or thing that, having mastered this level, a person can use immediately together with obtaining a diploma. This level presents this individual with opportunities that allow him to implement the efforts spent during the years of study in a successful activity – in his chosen profession in the future. Society as a whole is interested in giving the younger generation the educational and intellectual potential necessary for its successful independent activity in the future.

2.3. Development of various types of higher educational establishments. Universities in the higher education system

Currently, the training of specialists with higher education in the Republic of Belarus is carried out on the basis of general secondary, secondary vocational or secondary special education.

Higher educational establishments in the Republic of Belarus may be of the following types (Article 203 of the Code of the Republic of Belarus on Education):

– university;
– academy (conservatory);
– institute.

Training in these establishments ends with the passing of the state exam on the profile of the specialty and (or) the defense of the diploma project (thesis).

The University trains specialists at all levels of higher education in a number of specialized specialties, mainly for scientific activities, retraining and advanced training of specialists and managers of relevant specialties; fundamental scientific research is carried out in a wide range of natural sciences, humanities and other areas of science, technology and culture. The University is a leading scientific and methodological center for the development of education, science and culture.

The Academy (*conservatory*) is an institution of higher education that implements educational programs of higher education, as a rule, in one profile of education, educational programs of science-oriented education, performs fundamental and applied scientific research in one or more branches of science, carries out international cooperation, and can also implement an educational program of preschool education, educational

programs of general secondary education, educational programs special education, educational programs of vocational and technical education, educational programs of secondary special education, educational program of additional education for children and youth, educational programs of additional education for adults.

Academies are focused on a specific area of knowledge in the field of science or art and train specialists for the chosen field. The formal difference between an academy and a university is determined by the qualifications of teachers, the number of graduate students, the number of profiles, and the conduct of scientific work. For the rest, academies train future specialists according to the same higher education programs as universities.

The Conservatory implements educational programs mainly in the specialties of musical and theatrical art.

The Institute is an institution of higher education that implements an educational bachelor's degree program in one or more related specialties of one or more areas of education, performs fundamental and (or) applied scientific research in one or more branches of science, carries out international cooperation, and can also implement a continuous educational program of higher education, an educational program of a master's degree, educational programs of science-oriented education, educational programs of additional education for adults.

The institute trains specialists, as a rule, at the first level of higher education in a number of areas and specialties, and conducts scientific research in a specific direction of science, technology and culture.

Institutes in the rank of universities come after academies. Training in them is even more narrow-profile. Institutes train specialists of only one profession. They can be part of another university – this is the main difference between institutes and academies and universities. There are fewer researchers in institutes quantitatively.

In recent years, a university has become the main type of higher educational institution in the country. It has special requirements in its educational, methodological and research activities. University education today is aimed at developing the creative component of the forming (growing) personality, which could raise and solve issues of the development of future technologies. A modern university creates the intellectual capital of society. At the same time, it should be noted that at the present stage of society's development in university education,

innovative education comes to the forefront; education integrated with intensive research activities; close connection of university research with training and the needs of industry and the economy; interdisciplinarity of education and scientific research; humanization of education, etc.

University higher education in developed countries is a very broad and highly developed differentiated multi-level social systems (subsystems of society) of continuous improvement of knowledge and skills of members of society, which play an important role in the socialization of an individual, his preparation for obtaining a particular social status and performing corresponding roles in the stabilization, integration and improvement of social systems. University education is a factor in the reproduction of the socio-professional structure of society.

In addition, the university is a special social service station, the main agent for providing various services to the population, consisting of fairly autonomous elements – faculties, departments, laboratories, classes. A university that provides highly qualified educational services accumulates significant labor, material and financial resources. Moreover, the production of educational services (the traditional activity of higher educational institutions) is an important, but far from the only activity of modern universities. They develop science, improve production technologies, because the leading professors are not only teachers, but also major scientists, managers, politicians.

The main criteria for determining the status of a university-type higher educational institution are the following:

– international recognition of an educational institution as a scientific (creative), scientific and methodological center in the appropriate profile;

– recruitment of at least 60 % of the teaching staff with specialists with academic degrees and titles; performing research, creative or scientific and methodological work by each teacher in order to gradually maintain their qualifications;

– participation of students in research (development), creative activities in order to form independent productive thinking;

– the existence of scientific and pedagogical schools;

– the volume of fundamental scientific research works, including those on republican scientific and technical programs, is not less than 30 % of the total volume of scientific research;

– the availability of extended general scientific and general professional disciplines in the content of training specialists;

– effective training of highly qualified specialists of different levels through postgraduate and doctoral studies;

– preparation of new textbooks and teaching books for the education system of the republic;

– the use of modern progressive technologies in the training of specialists, advanced training, etc.

2.4. Science-oriented education as a condition for lifelong learning (education)

The processes of globalization and the socio-economic, socio-cultural and geopolitical transformations caused by it determine the need for lifelong learning (education). The main task of lifelong education is to "promote" a person to self-development, readiness to create, develop and mobilize internal resources for personal improvement in a wide range of moral, general cultural, social, communicative, professional qualities.

Lifelong learning (education) is one of the leading concepts of modern pedagogy. The main goal of the system of lifelong learning (education) is the integral development of the individual, and its leading features are lifelong learning (continuity), progressiveness, integrativity, the continuity (succession).

Lifelong learning (education) is not a system of educational programs adjusted to each other, but the process of personal and professional development of a person throughout life, which is ensured by the unity and integrity of the education system, the creation of conditions for self-education and comprehensive development of the individual, a set of successive, coordinated, differentiated educational programs of various stages and levels that guarantee citizens the implementation of the right to education and provide an opportunity to receive general education and vocational training, retraining, and improve their qualifications throughout their lives. Education does not end with a diploma or certificate.

In the structure of lifelong professional education, two subsystems can be distinguished: *basic and additional education*. The relations between the elements of the subsystem of basic education are built on the principle of hierarchy, each subsequent link provides a higher level of education. In the subsystem of additional education, the links are autonomous and independent, they exist in parallel with each other. Additional education is not education of a higher level in comparison with the basic one.

Basic education in the Republic of Belarus includes the following levels: preschool education; general secondary education; vocational education; secondary special education; higher education; science-oriented education.

The unity and continuity of basic education is ensured by the continuity of its levels and the consistency of the content of educational programs of basic education.

The goal of *science-oriented education* is the timely and high-quality training of highly qualified teaching and scientific personnel for higher educational institutions, as well as highly qualified scientists for research organizations and institutions of the Republic of Belarus and foreign countries.

Science-oriented education (Article 214 of the Code of the Republic of Belarus on Education) is the level of basic education aimed at developing the personality of a postgraduate student, associate, doctoral student, applicant and implementation of their intellectual and creative potential, development of professional skills in organizing and conducting scientific research, including the assignment of the scientific qualification "Researcher".

Science-oriented education includes *postgraduate studies* (adjunct/ associate), aimed at training specialists with the skills of planning and independent conduct of scientific research, deep theoretical knowledge allowing them to prepare a qualifying scientific work (dissertation/ thesis) for the degree of candidate of Sciences (PhD). The educational program of postgraduate (adjuncture/associate studies) provides the scientific qualification "Researcher".

Doctoral studies aimed at training specialists who have the skills to organize research work in a new direction of scientific research or in the development of existing topical areas of scientific research, analytical generalization of the results of scientific activity, allowing them to prepare a qualifying scientific work (dissertation) for the degree of Doctor of Sciences.

The term of obtaining science-oriented education is:

– in the full-time form of education – no more than 3 years;

– in the form of correspondence education – no more than 4 years;

– in the form of an application – no more than five years.

Obtaining science-oriented in the Republic of Belarus can be carried out in the following educational establishments (institutions) and organizations:

– university, academy (conservatory), institute;

– Academy of Postgraduate Education, Institute of advanced Training and Retraining;

– organizations that provide scientific and methodological support for science-oriented, subordinate to the republican bodies of state administration;

– scientific organizations subordinate to the republican state administration bodies, other state organizations subordinate to the Government of the Republic of Belarus, the National Academy of Sciences of Belarus;

– organizations authorized by the President of the Republic of Belarus to implement educational programs of postgraduate education.

The participants of the educational process in the implementation of educational programs of science-oriented are postgraduate students, adjuncts, doctoral students, applicants, teaching staff, including scientific supervisors, scientific consultants.

Scientific supervisor is a specialist appointed by the head of an educational institution (an organization that implements educational programs of postgraduate education) to assist in mastering the content of the educational program of postgraduate studies (adjunct / associate studies), which ensures obtaining the scientific qualification "Researcher", and preparing a qualifying scientific work (dissertation/thesis) for the degree of candidate of Sciences (PhD).

Scientific consultant – a specialist appointed by the head of an educational institution (an organization that implements educational programs of postgraduate education) to assist in mastering the content of the educational program of doctoral studies and preparing a qualifying scientific work (dissertation/thesis) for the degree of Doctor of Sciences.

Scientific and methodological support of science-oriented education when mastering the educational program of postgraduate studies (adjunct/associate), which provides obtaining the scientific qualification "Researcher", includes individual work plans of postgraduate students, adjuncts, applicants and programs-minimums of candidate examinations in special disciplines.

Scientific and methodological support of science-oriented education when mastering the educational program of doctoral studies includes individual work plans of doctoral students, applicants. Postgraduate students, adjuncts, doctoral students, applicants pass the *interim* and *final certification*.

The forms of interim certification of graduate students, adjuncts, applicants when mastering the content of the postgraduate educational program (adjunct/associate), which provides obtaining the scientific qualification "Researcher", are the following:

a) report of a graduate student (adjunct/associate, applicant) on the implementation of an individual work plan;

b) a candidate exam in a special discipline.

The form of the interim certification of doctoral students, applicants when mastering the content of the educational program of the doctoral program is the report of the doctoral student (applicant) on the implementation of an individual work plan.

The final certification of graduate students, associate students, doctoral students, applicants when mastering the content of educational programs of science-oriented education is carried out in the form of a report of a graduate student (associate, doctoral student, applicant) on the implementation of an individual work plan and is carried out by the state certification commission.

2.5. Trends in the development of national higher education systems in the countries of Europe and the Commonwealth of Independent States

In order to train specialists of a new formation capable of working in various areas of the "knowledge economy", European countries and the Commonwealth of Independent States (CIS) have been reforming their national education systems over the past fifteen years. In addition, in the context of globalization of economic and social processes, a characteristic feature of the development of national education systems is their desire to integrate and create a single world space while preserving national training and educational (upbringing) features and priorities. Globality is becoming a distinctive feature of the new world educational system, which is a sphere of open, flexible, lifelong (continuous) education of a citizen of any country throughout his life.

The movement towards the construction of a single pan-European (world) educational space necessitates the creation of common principles for the functioning of a single educational sphere, harmonization of national educational standards, unification of national educational systems.

Currently, on the European continent, the most real integration process in the educational sphere is the Bologna Process, which is aimed at creating a single European higher education space, which largely affects the general education system. In June 1999, in the city of Bologna (France), the Ministers of Education of 29 European states signed the Declaration on the European Area for Higher Education, which marked the beginning of the Bologna process, the main goal of which is to improve the quality and competitiveness of European education in the world market of educational services.

Currently, 47 States are participating in the Bologna process. The main goal of the Bologna process is to create a European higher education area, which "will provide for the possibility of free movement of teachers, students and schoolchildren for educational purposes, as well as more effective promotion of the recognition of their qualifications".

The Bologna Declaration, as a program document for the creation of a single European education space, proceeds from three objective conditions:

1) the process of European integration has become a reality, and the prospect of EU enlargement opens up new horizons for it; this, in turn, puts forward the imperative of strengthening and developing the intellectual, cultural, social, scientific and technical potential of Europe;

2) higher education is designed to become adequate to the challenges of the new millennium and to promote the education of students and all citizens of a sense of belonging to shared values and a common socio-cultural partnership;

3) the higher school is responsible for training the mobile workforce, expanding its employment prospects and developing the contingent as a whole.

The main goals of the Bologna Process are the following:

– building a European higher education area as a key direction for the development of citizens' mobility with employment opportunities;

– formation and strengthening of the intellectual, cultural, social, scientific and technical potential of Europe, increasing the prestige of the European higher school in the world;

– ensuring the competitiveness of European universities with other systems in the struggle for students; achieving greater compatibility and comparability of national higher education systems; improving the quality of education;

– increasing the central role of universities in the development of European cultural values, universities are considered as carriers of European consciousness.

The main provisions of the Bologna process:

1. *Introduction of two-cycle training*. It is proposed to introduce actually two training cycles: 1st – before receiving the first academic degree, 2nd – after receiving the first academic degree. The duration of training in the 1st cycle should be no less than 3 and no more than 4 years. Training during the 2nd cycle can lead to a master's degree (1–2 years of study after receiving the 1st degree) and/or a doctoral degree (with a total duration of 7–8 years).

2. *Introduction of the credit system*. It is proposed to introduce a system of accounting for the labor intensity of educational work in credits in all national education systems. It is proposed to take ECTS as a basis, making it a cumulative system capable of working within the framework of the concept of "lifelong learning".

3. *Quality control of education*. It is planned to establish accreditation agencies that are independent of national Governments and international organizations. The assessment will be based not on the duration or content of the training, but on the knowledge, skills and abilities that the graduates have acquired. At the same time, the standards of transnational education will be established.

4. *Expanding mobility*. Based on the implementation of the previous paragraphs, a significant development of student mobility is expected. In addition, the question is raised about expanding the mobility of teaching and other personnel for mutual enrichment of European experience. It is planned to change national legislative acts in the field of employment of foreigners.

5. *Ensuring the employment of graduates*. One of the important provisions of the Bologna process is the orientation of higher educational institutions to the final result: the knowledge of graduates should be applicable and practically used for the benefit of the whole of Europe. All academic degrees and other qualifications should be in demand by the European labor market, and professional recognition of qualifications should be facilitated. To ensure the recognition of qualifications, the widespread use of the Diploma Supplement recommended by UNESCO is planned.

6. *Ensuring the attractiveness of the European education system*.

One of the main tasks that should be solved within the framework of the Bologna process is to attract more students from other regions of the world to Europe. It is believed that the introduction of a pan-European system for quality assurance of education, a credit accumulative system, easily understood qualifications, etc. will lead to an increase in the interest of European and other citizens in higher education.

The creation of a single pan-European space determines the unification of national educational systems, bringing them to common structural and content forms. It should be noted that the main transformations in the secondary and higher schools of Western European countries were carried out in the 70–80 years of the last century and by the end of the 90s of the last century were almost completed.

A characteristic feature of these transformations is the functioning of multi-level training in secondary general education schools and higher educational institutions. At the same time, multi-level training is understood as such an organization of the educational process that ensures the possibility of achieving at each stage of preparation a certain educational level corresponding to the interests and capabilities of the student.

The Bologna Declaration provides for the adoption of a system of European higher education based on two main cycles. The degrees of the first and second cycles should have different orientation and multi-specialty in order to meet different individual, scientific and labor market needs. The degrees of the first cycle should provide access to the curricula of the second cycle. At the same time, second-cycle degrees should provide access to postgraduate (doctoral) programs.

For a more complete recognition of academic degrees (diplomas), the Bologna Declaration provides for the issuance of a Diploma Supplement to each graduate of a higher educational institution, which will also contribute to increasing employment opportunities and further education.

The European Credit Transfer System (ECTS) plays a significant role in promoting student mobility and curriculum development (development of educational programs). ECTS is increasingly becoming a common basis for national credit transfer systems (credits). In addition, in the near future, it is planned to move the ECTS from the transfer system to the system of accumulating credit units (credits), which will be consistently applied in the emerging European Higher Education Area.

An equally important task of the Bologna process is to ensure the quality of higher education at the level of educational institutions, national and pan-European levels. At the same time, in accordance with the principle of independence of educational institutions, the responsibility for ensuring the quality of education, first of all, lies with the higher educational institutions themselves. The establishment of an effective quality assurance system for higher education at the pan-European level provides for the creation of appropriate national systems for the quality of education, which should contain: identification of bodies and institutions and the establishment of their responsibilities for the quality of education in higher educational institutions; creation of a system of accreditation, certification of educational institutions; evaluation of training programs or institutions, including their internal and external evaluation; participation of students in the assessment of educational institutions; provisions on international participation, interaction and development of international relations of universities, etc.

The Bologna Declaration provides for the expansion of the European dimension in higher education through the development of integrated training programs that correspond to the European orientation of education, as well as joint programs of the first, second and third (postgraduate) levels. In this direction, work is being carried out to eliminate legal obstacles to obtain and recognize jointly issued diplomas, to develop and ensure the quality of joint educational programs that contribute to obtaining jointly issued diplomas. The program of expanding the European dimension is aimed at ensuring that students can fully implement their personal potential and have the opportunity to find a job in various European countries.

In general, it can be noted that the Bologna Declaration currently provides for: the adoption of a system of clear, transparent and comparable degrees with the issuance of diploma supplements to ensure the employment of European citizens and increase the international competitiveness of European higher education; the introduction of a system of two-stage (two-level) higher education: basic and postgraduate; the adoption of a credit system compatible with the European ECTS system; stimulating European cooperation in the field of quality assurance of education in order to develop comparable criteria and methodologies; strengthening the European dimension of higher education (promoting the necessary European views in higher education).

2.6. Practical class

Questions for discussion

1. Higher education in the context of globalization processes and informatization.
2. Functions of higher education in modern socio-economic environment (conditions).
3. Continuity (succession), lifelong (continuity) and variability of higher education.
4. Competence-based approach in education.

Practical tasks

1. Study the information provided on current trends and paradigms of higher education and fill in the tables below.

Comparative analysis of current trends and paradigms of higher education

The educational paradigm is a set of theoretical and methodological prerequisites that determine the specific actions of a teacher in various types of educational activities, the prerequisites that he is guided by as a model of action.

Let's consider one of the most recent classifications of educational paradigms.

In modern pedagogy, there are four leading paradigms of education: *cognitive, personality-oriented, functional and cultural.*

The cognitive paradigm. Cognitive (latin cogito – I think) – related to cognition only on the basis of thinking. According to the cognitive paradigm, education is associated only with cognition based on thinking. The purpose of training is knowledge, skills and abilities that reflect the social order.

The main source of knowledge is the educator (trainor, teacher).

The student (learner) is considered as an object (and not a person) that needs to be filled with knowledge. The personal aspects of learning (training) are reduced only to the formation of cognitive motivation and cognitive abilities. The task of comprehensive development of a personality and the development of its activity in learning(training) is not set.

The academic subject is considered as a kind of "projection" of science, the educational material – as a didactically interpreted scientific

knowledge. One of the main categories in the cognitive paradigm is learning activity. Therefore, the entire organization of the learning process is aimed at reflecting in programs and textbooks the state of scientific knowledge and methods of its mastering.

The main criterion for the effectiveness of learning (training) is knowledge, skills and abilities. The characteristic of personal development is not taken into account. Therefore, the main attention is paid to information support of the individual, and not to his development. This development is seen as a "by-product" of educational activity, the purpose of which is the assimilation of certain knowledge and methods of activity.

Pedagogy, which substantiates its provisions in the context of the cognitive paradigm, is called "knowledge", imperative, traditional, and the school is called the "school of memory", since the focus is on the development of memory, and not the ability to think.

The essence of *personality-oriented pedagogy* is the consistent attitude of the teacher to the student as a person, as an independent and responsible subject of his own development and as a subject of educational influence.

As we can see, in cognitive pedagogy, communication is carried out through content, forms, methods and tools. In personality-oriented learning (training), there is a direct interaction between the teacher and the student, which is aimed at mastering the material using forms, methods and tools. In personality-oriented learning, each student has his own vector of development, which is built not from the teacher to the student, but vice versa.

The functional paradigm. Along with these two paradigms of education, researchers distinguish another one – functional. The orienting role in it is performed by the social order of society for education. It proceeds from the fact that education is essentially a socio-cultural technology, so it should prepare the personnel necessary for society.

The functional approach proceeds from the fact that the individual must assume some of the functions of society, which implies a certain competence of the individual associated with the ability to acquire knowledge, use it creatively and create new knowledge.

Professional education has a clear functional orientation – to prepare a person for professional work. This paradigm can be implemented either according to the cognitive paradigm (specialist training), or according to the personality-oriented paradigm (professional personality development).

The cultural paradigm. Education is a socio-cultural phenomenon. In the light of the cultural approach, the center of education is a person as a free, active individual, capable of personal self-determination in communication and cooperation with other people and culture.

Thus, education as a part of culture, on the one hand, feeds on it, and on the other hand, it affects its preservation and development through a person. At the same time, education performs the following cultural functions:

– humanitarian (preservation and restoration of the human ecology, his physical and mental health, personal freedom, individuality, spirituality, morality);

– cultural-creative (preservation, transmission, reproduction and development of culture by means of education);

– sociologizing (assimilation and reproduction of social experience).

Consequently, culture determines the goals, objectives and content of education.

At the same time, education, as a part of culture, contributes to the preservation and development of culture. The connecting link between culture and education is a person who is both the subject of a certain culture and the subject of the corresponding education.

In pedagogy, as a rule, two educational paradigms are compared, polar in their characteristics: *the traditional paradigm* (or knowledge-based) and the *personality-oriented* one (humanistic or subject-subject).

1. *The traditional paradigm (or knowledge-based)*. The main goal of learning (training) and education (upbringing) in the context of this paradigm is to give a person deep, solid, versatile academic knowledge. The main source of knowledge is the trainer (teacher). The learner (student) is viewed mainly as an object that needs to be filled with knowledge. As a kind of knowledge-based, we can distinguish the technocratic (or pragmatic) paradigm. Its main purpose of learning (training) and education (upbringing) is to give a person the knowledge, skills and abilities that will be practically useful and necessary in life and professional activity, will help to interact correctly with modern technology. The basic principle is polytechnic education. Thus, the knowledge-based and technocratic paradigms of education do not focus on the personality of the student as a subject of the educational process. The student is the object of pedagogical influence. It provides for the standardization of the educational process, in which learning

technologies are focused mainly on the capabilities of the average student. The direct (imperative) style of managing the students' educational activities is used. Models of education based on the principles of these paradigms are characterized by monologized teaching, underestimation of the role of initiative and creativity of the subjects of the educational process. Both models are aimed at forming a personality with predetermined properties and transmitting the content of learning methods in a ready-made (finished) form.

Currently, in domestic education, the outdated educational and disciplinary model is being replaced by a humanistic, personality-developing model centered around the approach to students as full partners, in terms of cooperation and denying a manipulative approach to them.

2. *The personality-oriented (humanistic or subject-subject) paradigm*. The main goal is to promote the development of human abilities, the development of his personality, his spiritual growth, his morality and self-improvement, self-fulfillment. A person may not know much, but it is important that a truly spiritual and moral person is formed, capable of self – development and self-improvement; in the center of this paradigm – a man with all his weaknesses and strengths.

The essence of the humanistic paradigm is the teacher's consistent attitude to the student as a person, an independent and responsible subject of his own development and at the same time as a subject of educational influence. The main difference between this paradigm and the traditional one is, first of all, that subject-object relations are replaced by subject-subject relations.

Table 2.1

A description of the leading educational paradigms

Leading educational paradigms (a paradigm is a set of theoretical and methodological prerequisites that are guided in practice)			
Cognitive	Personality-oriented	Functional	Cultural
Education is considered as _____	Education is _____	Education is _____	Education is _____

Table 2.2

Comparative characteristics of the traditional and humanistic educational paradigms

Indicators	The paradigm of education	
	Traditional paradigm (or knowledge-based) (*subject-object*)	Humanistic paradigm (*subject-subject*)
1	2	3
1. The main mission of education		
2. Axiological basis[1]		
3. Educational goals		
4. The role of knowledge, skills and abilities		
5. The content of education		
6. The position of the student		
7. The role position of the teacher		
8. The relationship between the teacher and the student		
9. The nature of educational and cognitive activity		

Table 2.3

Comparative characteristics of traditional and innovative educational paradigms

Indicators	The paradigm of education	
	Traditional paradigm	Innovative (humanistic, personality-oriented)
1	2	3
1. Goal		
2. Leading mental processes		

[1] Axiology is a philosophical discipline that studies the category of values as the meaning-forming foundations of human existence, setting the direction and motivation of human life.

Table 2.3 (end)

1	2	3
3. Learning (training) through		
4. Methodological system		The system of active teaching methods, active learning

2. Formulate the essay topics to identify the level of understanding of the functions of higher education by students of different courses in modern socio-economic environment (conditions).

3. Prepare for a discussion on the problem "Conditions for improving the quality of higher education in modern environment".

TOPIC 3. PEDAGOGICAL FOUNDATIONS OF THE LEARNING PROCESS IN HIGHER EDUCATION

3.1. The subject, tasks and basic concepts of didactics of higher education.

3.2. The essence, functions and structure of the learning (training) process (teaching, learning as a student's activity).

3.3. Designing the goals and content of students' learning (training). Block-modular and competence-based approaches in the design of the content of higher professional education.

3.4. Educational standards in the field of higher education. Educational and program documentation of educational programs of higher education.

3.5. Regularities (laws) and principles of learning (training) as methodological and didactic regulatives of teaching activity.

3.6. Practical class.

3.1. The subject, tasks and basic concepts of didactics of higher education

Pedagogical science is traditionally divided into *didactics* (*the theory of learning* (*training*)) *and the theory of education* (*upbringing*)). Today, didactics (theory and methods of learning (teaching) has been defined as an independent branch of general pedagogy.

In the modern sense, didactics is the most important branch of scientific knowledge that studies and investigates the problems of education and learning (training). Didactics is a theoretical and at the same time normative-applied science. Didactic research makes real learning (training) processes its object, provides knowledge about the natural relations between its various aspects, reveals the essential characteristics of the structural and content elements of the learning (training) process. This is the scientific and theoretical function of didactics.

The obtained theoretical knowledge allows us to solve many problems related to learning, namely: to bring the content of education in line with changing goals, to establish the principles of learning (training), to determine the optimal possibilities of teaching methods and tools, to design new educational technologies, etc. These are the features of the normative-applied (constructive) function of didactics.

Didactics in the context of higher education reveals and substantiates the *goals*, *objectives*, *regularities* (*laws*), *principles*, *content*, *methods*, *tools*, *technologies*, *forms of the educational process* in higher educational establishments (institutions) for training specialists with higher education (fig. 3.1).

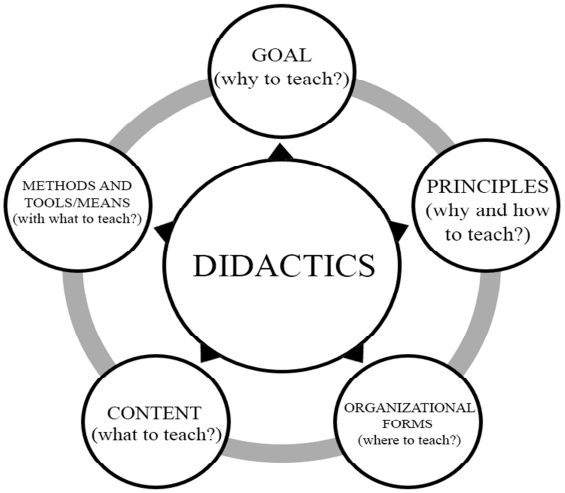


Fig. 3.1. Key issues of didactics

The object of didactics is education in all its scope and in all aspects.

The subject of didactics is a system of the following relations: teacher-student, student-study material, student-other students.

There are several basic concepts, or categories of didactics (tab. 3.1).

Table 3.1

Basic didactic categories

Category	The content of the category
1	2
Education	A purposeful process and the final result of acquiring methods of activity, cognitive skills and scientific knowledge

Table 3.1 (continued)

1	2
Pedagogical process	Purposeful, organized interaction of teachers and students on the implementation of educational (upbringing), developmental and educational tasks within the framework of the pedagogical system. It includes *two independent, but closely interrelated processes*: learning (training) and education (upbringing). The main subjects of the pedagogical process are the teacher and the student
Learning	A specially organized, controlled process of interaction between a student and a teacher, as a result of which the student forms certain knowledge, abilities and skills, develops creative abilities. It is ***bilateral*** in nature. Learning necessarily involves two interrelated processes: teaching and learning (training). Therefore, learning is based on joint activity, purposeful interaction of the student and the teacher. They should both be active in the educational process, i. e. act as subjects of learning
The relationship between education and learning (training) should be viewed as the relationship between the goal and its means: *education is the goal*, *learning is the means* to achieve it	
Teaching (activities of those who teach)	A special organised activity of a teacher, including the communication of a certain amount of knowledge, abilities, skills to students, the organization of educational and cognitive activities, the assessment of educational achievements, the formation of professional competence in general
Learning (activities of those who study)	The student's own educational actions aimed at developing his abilities, acquiring the necessary knowledge, abilities and skills
Learning (the process)	*The process and result* of acquiring knowledge, skills and abilities by a person. The success of learning depends on many factors, primarily psychological: motivation of learning activities, attention, imagination, memory, thinking, the presence of volitional efforts, etc.

Table 3.1 (end)

1	2
Knowledge	Scientific facts, concepts, schemes, images, rules, laws, theories that are reflected in the consciousness and preserved in the memory of the student
Abilities	Knowledge of ways to apply the acquired knowledge and life experience in practice. Abilities can be formed with the help of exercises
Skills	Actions that are performed by a person almost automatically, because they are brought to absolute perfection. A person acquires skills as a result of constant repetition
Content (of learning (training), education)	A specially selected and recognized by society (state) system of elements of the objectified experience of mankind, the assimilation of which is necessary for performing a certain professional activity
Teaching method	The way to achieve the goals and objectives of learning (training)
Tools/Means of teaching	Ideal and material objects used by the teacher and the student to ensure the strength of the assimilation of knowledge
Form of teaching	– types of classes. They allow you to organize the educational process in accordance with the needs of students and the tasks set within the framework of educational and cognitive activities; – the way of external organization of the learning (training) process

Tasks of didactics in the context of higher education:

– substantiation of the specific goals of higher education;

– substantiation of social functions of higher school;

– substantiation of the education content;

– development and substantiation of methods for designing/constructing educational processes in higher school and the implementation of educational activities;

– determination of optimal ways, methods, forms, technologies of teaching in higher school;

– development of more modern learning processes and new training systems, etc.

The didactics of higher education is based on the leading provisions of general didactics:

1) learning (training) is a two-way (binary) process consisting of two interrelated processes: teaching and learning;

2) the learning (training) process proceeds effectively with the active cognitive activity of the student;

3) the learning (training) process is designed to perform three functions: educational, educational (upbringing), developmental.

3.2. The essence, functions and structure of the learning (training) process (teaching, learning as a student's activity)

The learning (training) process (educational process) is one of the two main components of an integral pedagogical process.

In the modern sense, learning (training) is characterized by the following features:

– bilateral nature;

– joint activity of teachers and students (cooperation);

– pedagogical guidance;

– systematic special organization and management;

– integrity and unity (the integrity of the learning process is ensured by setting and achieving common goals of teaching and learning, that is, it has a two-way character and is impossible without the unity of the activities of the teacher and students);

– compliance with the laws of age-related development of students;

– management of the students' development and education.

The essence of the learning (training) process is to stimulate and organize active educational and cognitive activities of students to acquire knowledge, develop abilities, views, beliefs and ideals.

The methodological basis of the learning process in modern didactics is the scientific theory of cognition. Like the process of scientific knowledge, the learning process is complex and contradictory. Its driving forces are contradictions – sources of development and improvement, which can be external and internal. The first are those that arise outside of the personality, although they relate to its development, the second

sources are those that arise within the learning (training) process, related to its participants.

As an example, we can highlight the contradictions:

– between the constantly increasing demands of society for education, which are dictated by socio – economic progress, and the possibilities of the learning (training) process in these conditions;

– between the cognitive tasks that are put forward by the learning (training) process, and the level of knowledge, skills, mental development of students (between knowledge and ignorance).

Learning as a procedural phenomenon has its own mechanisms, driving forces and functions. However, the concepts of "educational process" and "learning (training) process" should be distinguished.

The educational process is the course of training, covering all components: the teacher, the student, methods, techniques, forms and tools, material and technical support, etc. Therefore, the educational process has its own peculiarities in various types of educational institutions.

The learning (training) process is a specially organized and modeled cognitive activity that covers the teaching of the person who teachers (teacher) and the learning of those who studies (students).

The relationship "teacher – student" cannot be reduced to "transmitter – receiver"; an indispensable condition for learning is the *activity of both participants in the process, their interaction*. The teacher creates the necessary conditions: organizes the student's actions, directs them, communicates new information, demonstrates techniques and methods of action, controls, evaluates, uses certain tools. At the same time, the formation of knowledge, abilities and skills, concepts and mental operations is possible only as a result of the student's own activity.

According to the concepts of modern psychology (S. Rubinstein, A. Leontiev and others), the development of the psyche occurs in activity. Since the purpose of educational activity is to change the acting subject itself (the development of the student's abilities, mastering knowledge, methods of activity, etc.), *the main thing in teaching is* not the presentation of the material, but the *organization of the student's cognitive activity*. Therefore, **learning (training)** can also be defined as the *management of students' cognitive and practical activities*, as a result of which they form certain knowledge, skills and abilities, develop abilities.

According to the general goal of education, learning (training) should ensure the fulfillment of educational, upbringing and developmental

functions. This is a conditional division, because the learning (training) process is not limited to the formation of knowledge, skills and abilities but also involves education (upbringing), the formation of a worldview, personal development, raising the cultural level, etc. The allocation of the functions of the learning (training) process is necessary to ensure the effectiveness of the practical activity of the teacher, especially when planning the tasks of the lesson.

The educational function is the main and defining one. The main purpose of training is the assimilation of scientific knowledge, the formation of abilities and skills. Scientific knowledge covers facts, concepts, laws, peculiarities (laws), theories, reflects a generalized picture of the world.

The educational (*upbringing*) *function* involves the formation of a worldview, moral, labor, aesthetic, ethical ideas, views, beliefs, and a system of ideals. Objectively, training cannot but bring up certain views and beliefs. The educational (upbringing) function covers educational influences aimed at a person in order to form her reaction (attitude), activity, independence and purposefulness of activity.

The developmental function provides the process of mastering the personality, improves its perception, thinking, volitional, emotional and motivational spheres.

These functions are interrelated and interact in the process of comprehensive planning and solving the problems of education, upbringing and development of the student's personality using a variety of forms, tools and methods of teaching.

The learning (training) process at university is an integral system, the *structural components* of which are the target, incentive-motivational, operational-activity and evaluation-effective components. They form a complete cycle of interaction between the teacher and students – from setting goals to achieving learning outcomes.

The target component consists in the teacher's awareness and students' perception of the goals and objectives of the topic, a section of the academic discipline. Goals and objectives are determined based on the requirements of the curriculum, taking into account the characteristics of the student group.

The incentive-motivational component covers a system of techniques to stimulate students' interest, needs in solving the educational tasks assigned to them. The result of stimulation should be an internal process – the emergence of positive motives of learning among students. At the same time, motivation in learning is manifested at all stages.

The content component is defined by curriculum and textbooks, teaching aids. The teacher specifies the content, taking into account the tasks set, the specifics of the social environment, the educational capabilities of students, etc.

The operational-activity component is implemented using the best methods, tools and forms of organization of teaching and learning.

The evaluation-effective component provides for the teachers' assessment and students' self-assessment of the results achieved in the learning (training) process, clarifying their compliance with educational tasks, identifying the causes of certain gaps in students' knowledge, etc.

Schematically, the model of the structure of the learning (training) process is shown in fig. 3.2.

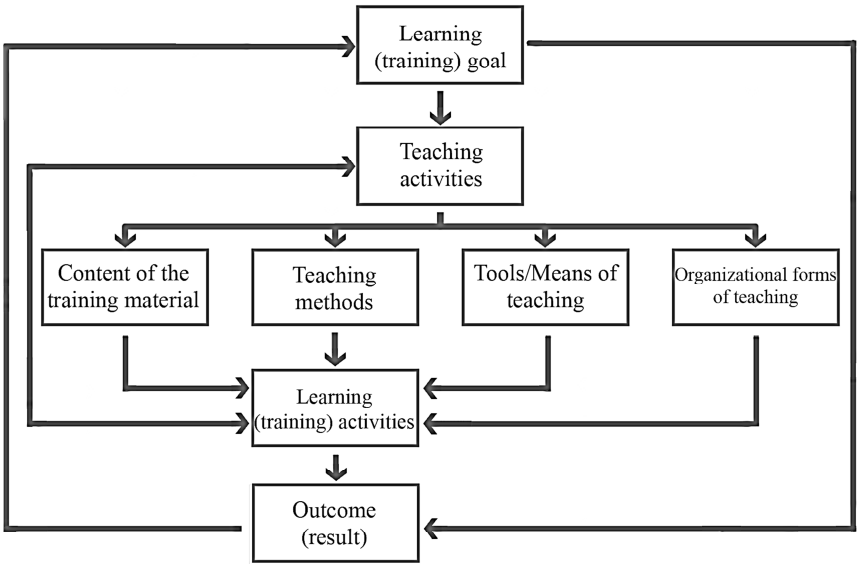


Fig. 3.2. Model of the structure of the learning (training) process

The system-forming concepts of the learning (training) process as a system are:

– *the goal of learning* (*training*) (social order, i. e. the volume and corresponding quality of knowledge that the student should master. In the learning (training) process, there is a teacher's goal and a student's goal);

– *teacher's activity* (*teaching*). He defines the goal of the educational process, the content of the educational material, the structure of the lesson, the methods of educational activity. He himself organizes the educational work of students, creating favorable conditions for this. The teacher directs/guides the learning (training) process;

– *students' activities* (*learning*). A student is a person who is interested in learning. He shows his activity. In this sense, both he and the teacher strive for cooperation and co-creation;

– *outcome/result.* Education is a product of systematic learning (training). In the course of learning (training), products of various quality are created. Various criteria have been developed for their determination, analysis and measurement. Traditionally a general description of the effectiveness and achieved results is given through the levels of learning (training) and the levels of students' cognitive activity.

The variable components of this process are the control tools. They include the content of educational material, teaching methods, material tools of teaching (visual, technical, textbooks, etc.), organizational forms of learning as a process and educational activity of students. The connection and interdependence of teaching tools/means, as variable components with constant meaning-forming components, depends on the goal of learning (training) and its final outcome/result. They form a stable unity and integrity, which has integrative properties and is subordinated to the general goals of education (upbringing), i. e. global goals in preparing the younger generations for life and activity in the existing society. The cementing principle of the functioning unity of all these components is *the joint subject-related activity of teaching and learning*, including the processes of communication. Thanks to it, i. e. the joint activity of teaching and learning (their unity), multiple, diverse, different-quality elements and their connections form an integral system of learning (training), and give it order and organization, without which it as such is generally deprived of the ability to function.

In didactics the learning (training) process is considered as an activity, and therefore it clearly shows:

– analysis of the initial situation, determination and setting of the learning (training) goal and its acceptance by students;

– work planning, selection of content and tools to achieve the goal;

– presentation of a new fragment of educational material by the teacher in different ways and its conscious perception by students;

– implementation of training and educational operations, organization of educational work of the teacher and students (organization and self-organization of students when applying new educational material to its optimal level in these conditions);

– organization of feedback, control and correction of work on students' assimilation of the content of the material and self-control;

– analysis and introspection (self-analysis), assessment of learning (training) outcomes;

– training and work of students outside the educational institution.

3.3. Designing the goals and content of students' learning (training). Block-modular and competence-based approaches in the design of the content of higher professional education

Any activity presupposes a goal, motive, means and result. So the goal is one of the elements of conscious activity and human behavior. Pedagogical activity is not an exception.

It is known that in pedagogy, the *goal* is understood as an ideal representation of the result of future activity or the expected results of education. Traditionally, the goals of education are defined as the formation of students' knowledge, skills and abilities, introducing a person to culture, preparing him for work. The development of goals of various degrees of generalization and the implementation of these goals in educational practice is an important task of pedagogy.

In the pedagogical educational system, there is a *hierarchy of goals*:

I (macrosocial) level is the definition of the ideal of education in society (in a particular country, in a particular nation). This is the social ideal of a perfect person or group of people, humanity, civilization, the goals of education set by society. State regulatory, public goals – standards are fixed in laws and other documents.

II (microsocial) level – Further detalization of the general goals of education of the first level for educational purposes of specific educational institutions or institutions of additional education. The goals of the pedagogical process at this level are formulated, for example, in curricula and education programs for students of a certain age, in the plans for the teaching and educational work of the school and individual teachers.

III (interpersonal) and IV (personal) levels – specifying the goals set at the first and second levels, taking into account the individual characteristics of students, their abilities, inclinations, interests, etc. The personal level of the implementation of the pedagogical process involves the setting of goals and objectives of self-education (self-education, self-learning).

The hierarchy of the goals in the pedagogical educational system is schematically shown in fig. 3.3.

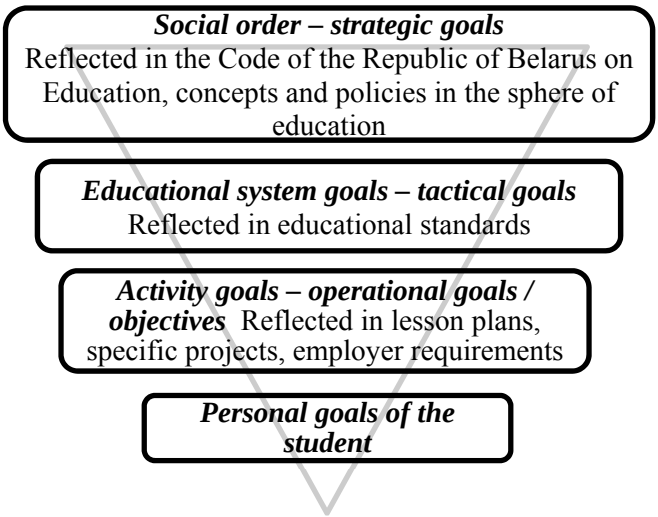


Fig. 3.3. Hierarchy of the goals in the pedagogical educational system

There are goals that society and the state set for the education system. In turn, in the education system at each stage, the goals are unique. Each educational institution, be it a university or a school, carrying out the pedagogical process, is moving towards its goal. And, finally, the teacher, thinking over and conducting a specific lesson, necessarily sets certain goals.

Educational goals should be:

– *specific* – the goal should be clearly formulated. Otherwise, in the end, a result may be achieved that differs from the planned one;

– *measurable* – if the goal does not have any measurable parameters, it will be impossible to determine whether the result has been achieved;

– *achievable* – goals are used as an incentive to solve some tasks and, thus, further progress by achieving success. It is worth setting rather complex and challenging goals, but they must be achievable;

– *result-oriented* – goals should be characterized based on the result, not the work being done. Thus, efficiency is achieved;

– *correlated with a specific deadline* – any goal must be achievable in a certain time dimension.

In general, the methodological foundations of goal-setting in the higher education system are:

– social and state orders;

– educational standards;

– market needs for specialists with higher education.

The difference in approaches to determining the goals of education lies in understanding the essence of the expected result. With the traditional approach, educational goals are understood as personal new formations that are formed in students. Goals are usually formulated in terms that describe these new formations: students must master such concepts, information, rules, skills, they need to form such views, qualities, etc. This approach to setting educational goals is quite productive, especially compared to the common practice of identifying pedagogical goals and pedagogical tasks, when goals are formulated in terms describing the actions of the teacher (reveal, explain, tell, etc.).

However, the definition and design of educational goals through the description of personal students' formations comes into conflict with new social expectations in the field of education. The traditional approach to defining the goals of education focuses on preserving the extensive path of higher school development. From the standpoint of this approach, the more knowledge a student has acquired, the better, the higher the level of his education is.

But the level of education, especially in modern conditions, is determined not only by the amount of knowledge and their encyclopedic nature. From the standpoint of the **competence-based approach**, the level of education is determined by the ability to solve problems of varying complexity based on existing knowledge. The competence-based approach does not deny the importance of knowledge, but it focuses on the ability to use the knowledge gained. In the first case, the goals of education model the result, which can be described by answering the question: what new things does a student learn at a university? In the

second case, the answer to the question is assumed: what will the student learn during the years of study in higher school? From the standpoint of the competence-based approach, the main direct result of educational activity is the formation of key competencies.

The general goals of higher education cannot be presented as a simple set of goals for studying academic disciplines. At the same time, the study of academic disciplines is of crucial importance for the purposes of higher education.

Usually, *several components are distinguished in the structure of the goals of the discipline*: the assimilation of knowledge; the development of skills and abilities; the formation of relationships; the development of creative abilities. This structure of goals corresponds to the ideas about the content of the social experience that needs to be mastered at high school. This approach to defining goals is easy to use if the content of education is pre-determined. In this case, the educational results that can be obtained when mastering the content of education are specified.

From the standpoint of the **competence-based approach**, the definition of the goals of the discipline should precede the selection of its content: first you need to find out what this academic discipline is for, and then select the content, the development of which will allow you to get the desired results. At the same time, it should be taken into account that some results can be obtained only through the interaction of the academic discipline with other components of the educational process, and some results can be achieved only within the framework of the academic discipline and it is impossible (or difficult) to obtain them by studying other disciplines.

The first group of goals of an academic discipline can be characterized as goals-intentions. These are the goals of the formation of value orientations, ideological attitudes, the development of interests, the formation of needs and the achievement of other personal results, which depend on many different factors, including "extracurricular" ones.

The second group of discipline goals includes goals describing the "destination station", the results that the higher school can guarantee (with a certain cognitive activity of the student himself and a number of other conditions). There are four types of goals in this group:

1) goals modeling meta-disciplinary results that can be achieved through the interaction of a number of disciplines (for example, the formation of general professional skills, communication and other key skills, some functional skills);

2) goals that determine the meta-disciplinary results that can be achieved within the discipline, but can be used in the study of other disciplines or in other types of activities;

3) goals focused on the assimilation of knowledge and skills that ensure the general cultural competence of students, their ability to understand certain problems and explain certain phenomena of reality;

4) goals focused on the assimilation of knowledge and skills that are of basic importance for professional education of a certain profile.

Currently, block-modular and competence-based approaches have become the most widespread in the design of the content of higher professional education.

In the technology of **block-modular learning**, attention is focused on certain logical components. The module itself is a logically completed part of the educational material, necessarily accompanied by the control of students' knowledge and skills. The basis for the formation of modules is the curriculum program of the discipline.

The number of modules depends both on the characteristics of the subject itself and on the desired frequency of control of learning. Modular training is inextricably linked with the rating control system. The larger or more important a module is, the more points it gets. Control by modules is usually carried out 3–4 times a semester, it includes a credit or exam for the course. The module contains cognitive and educational and professional parts. The first forms theoretical knowledge, the second – professional skills and abilities based on the acquired knowledge. The ratio of the theoretical and practical parts of the module should be optimal, which requires professionalism and high pedagogical skills of the teacher.

In the context of a **competence-based approach**, the educational process is focused on creating the most favorable conditions for self-development, self-determination of students. At the same time, the following provisions are essential to achieve the students' competencies:

– competence is an activity category, that is, it manifests itself only in certain activities;

– competence is not limited to knowledge or skills, but includes them;

– context is of great importance for determining competence, that is, a person who is competent in one type of activity may be incompetent in another;

– a significant role in the manifestation of competence is played by a specific situation, in the same field of activity, but in different circumstances a person may show (or not show) his competence;

– for the manifestation of competence, the significance (subjective value) of the tasks set for the individual, his interest in solving the problem is of great importance.

The implementation of this approach in the design of the educational process requires compliance with certain organizational and pedagogical conditions, which include:

1. Individualization of the educational process. It is provided by students' independent choice of academic disciplines, forms of study, internship places, independent determination of topics and directions of creative, research and project activities, etc. An important condition for the individualization of the educational process is the openness and variability of the author's programs of teachers.

2. Expanding the space of social implementation of students. It is ensured by the inclusion of students in various forms of public presentations (scientific and practical conferences, competitions, festivals, project protection), embedding students in socially significant programs at regional, national and international levels, ensuring the implementation of students' social projects, etc.

3. Organization of the space of reflection and mental activity (the educational space itself). It is provided, first of all, by a special pedagogical position of "tutor". The subject of tutor consultations is the discussion with the student of his educational goals and prospects, his educational history and social experience, the analysis of professional, etc.

4. The transition from the "knowledge" to the "capable" content of education. It is ensured by the fact that at high school, a student, along with the formation of knowledge, professional skills andabilities, masters a number of universal ways of activity – creativity, research, design.

In accordance with these conditions, the professional tasks of the teacher also change.

3.4. Educational standards in the field of higher education. Educational and program documentation of educational programs of higher education

The content of higher professional education is a specially selected system of elements of social experience, the assimilation of which is necessary for successful activity in a certain labor sphere. This is a set of socio-humanitarian, natural-scientific, general professional, special knowledge, skills and abilities, general cultural, professional and special competencies, experience in educational, industrial and research activities, ways of solving production tasks, professional values and norms that a future specialist is called upon to master in the process of professional training. Based on this, the content of higher professional education is reflected in the following normative documents: *educational standards, curriculum plans, curriculum programs, textbooks, etc*.

An educational standard is a technical regulatory legal act that defines the content of an educational program by establishing requirements for the educational process and the results of mastering its content.

In accordance with Article 201 of the Code of the Republic of Belarus on Education, educational standards of higher education are developed for each specialty (specialty direction) and establish requirements for the content of professional activity of a specialist with higher education, the competence of a specialist with higher education, the content of educational and program documentation of educational programs of higher education, the level of basic education of persons entering for higher education, the forms and timing of higher education, the organization of the educational process, the maximum volume of the academic load of students, cadets, trainees, the level of training of graduates, final certification.

The development of educational standards of higher education is organized by the Ministry of Education of the Republic of Belarus and is carried out jointly with educational and methodological associations in the field of higher education and organizations that make an order for personnel.

Educational standards of higher education are approved by the Ministry of Education of the Republic of Belarus in coordination with interested state bodies subordinate and (or) accountable to the President of the Republic of Belarus, republican bodies of state administration,

other state organizations subordinate to the Government of the Republic of Belarus, subordinate to which are institutions of higher education and (or) for which training is carried out.

An educational program is a set of documentation regulating the educational process and requirements for the conditions necessary to obtain, in accordance with the expected results, a certain level of basic education or a certain type of additional education (Article 1.20 of the Code of the Republic of Belarus on Education).

The educational and program documentation of educational programs of higher education includes curriculum plans, curriculum programs, internship programs and individual work plans of Master's students.

Curriculum[1] plans are subdivided into sample curriculum plans for specialties; curriculum plans of institutions of higher education for specialties; experimental curriculum plans for specialties; individual curriculum plans.

The curriculum plans include a state component and an educational institution component. The curriculum plans reflect profiling – a variant of the implementation of the corresponding educational program of higher education in the specialty, due to the peculiarities of the specialist's professional activity. The name of the curriculum plan during its development may include a short name of the profiling.

The sample curriculum plan for the specialty establishes the approximate schedule of the educational process, the complexity of academic disciplines, modules of the state component, the list and complexity of academic disciplines, modules of the component of the educational institution, the sequence and terms of studying academic disciplines, modules, type, labor intensity and terms of internship, types of training sessions, the ratio of classroom and independent work, the forms and timing of the intermediate and final certification.

The sample curriculum plan for the specialty is developed as an example of the implementation of the relevant educational standard of higher education and in the form (layout) of the approximate curriculum for the specialty determined by the Ministry of Education.

[1] Curriculum is related to the all-round development of a student. It is the overall content, taught in an educational system or a course. It is set out by Government or the administration of school, college or institute. Curriculum is directed towards all the subjects and the other activities in an academic course.

Sample curriculum plans for specialties are developed by organizations engaged in scientific and methodological support of higher education, and (or) educational and methodological associations in the field of higher education and approved by the Ministry of Education in coordination with interested state bodies subordinate and (or) accountable to the President of the Republic of Belarus, the National Academy of Sciences of Belarus, republican bodies of state administration, other state organizations subordinate to the Government of the Republic of Belarus, subordinate to which are institutions of higher education and (or) for which training is carried out.

The curriculum plan of the institution of higher education for the specialty establishes the schedule of the educational process adopted in the institution of higher education, the complexity of academic disciplines, modules of the state component, the list and complexity of academic disciplines, modules of the component of the educational institution, the sequence and timing of the study of academic disciplines, modules, type, complexity and timing of practical training, types of training sessions, the ratio of classroom and independent works, forms and terms of intermediate and final certification.

The curriculum plan of an educational institution for the specialty is developed on the basis of the relevant educational standard of higher education. The curriculum plan of an educational institution for the specialty includes the state component in accordance with the educational standard for the specialty, the component of the educational institution corresponding to the profiling of the specialty in the educational institution. An example in the development of the curriculum plan of an educational institution for the specialty can be a sample curriculum plan for the specialty.

The curriculum plans of educational institutions for specialties are developed by educational institutions for each specialty for each form of education and are approved by the heads of these educational institutions.

The experimental curriculum plan for the specialty is tested in the institution of higher education, on the basis of which experimental activities are carried out. The experimental curriculum plans can be developed for each form of education.

The individual curriculum plan establishes the specifics of obtaining higher education by successful students, cadets, trainees who, for good reasons, cannot permanently or temporarily attend training sessions and

(or) pass certification within the established time frame. Individual curriculum plans are developed by institutions of higher education on the basis of curriculum plans of institutions of higher education for specialties and approved by the heads of these educational institutions.

The individual master's work plan is developed on the basis of the curriculum plan, provides for measures to master the educational program of science-oriented education, forming the knowledge, skills and abilities of scientific, pedagogical and research work and providing a master's degree. The individual master's work plan establishes the list and sequence of academic disciplines studied, the amount of academic load, including a master's thesis preparation program, internship, research work, reporting forms and deadlines. Individual work plans of undergraduates are developed by institutions of higher education and approved by the heads of these educational institutions.

The curriculum programs of the educational program of the bachelor's degree are divided into sample curriculum programs for academic disciplines, modules; curriculum programs of institutions of higher education on academic disciplines, modules.

The curriculum programs of educational programs of the Master's degree, the continuous educational program of higher education are divided into sample curriculum programs for academic disciplines, modules; curriculum programs of institutions of higher education on academic disciplines, modules; programs-minimums for candidate exams on general academic disciplines; programs-minimums for candidate credits (differentiated credits) on general education disciplines.

A sample curriculum program for an academic discipline, a module is developed for an academic discipline, a module of the state component of a sample curriculum plan for a specialty, determines the goals and objectives of studying the academic discipline, module, links with other academic disciplines, modules, basic requirements for the results of educational activities of students, cadets, trainees, the content of the academic discipline, module, list of educational and other references.

A sample curriculum program for an academic discipline, a module is being developed as an example of the organization of the educational process for an academic discipline, module of the state component of the curriculum plan of an educational institution for a specialty.

Sample curriculum programs for academic disciplines, modules are developed by organizations engaged in scientific and methodological

support of higher education, and (or) educational and methodological associations in the field of higher education and approved by the Ministry of Education.

The curriculum program of an educational institution for an academic discipline, a module is developed according to the academic discipline, the module of the curriculum plan of the educational institution for the specialty, defines the goals and objectives of studying the academic discipline, module, links with other academic disciplines, modules, requirements for the results of educational activities of students, cadets, trainees, the content of the academic discipline, module, a list of educational and other references.

The curriculum programs of an educational institution for academic disciplines, modules are developed by institutions of higher education and approved by the heads of these educational institutions.

Programs-minimums for candidate exams on general academic disciplines; programs-minimums for candidate credits (differentiated credits) on general education disciplines are technical regulatory legal acts and determine the goals and objectives of studying the corresponding general education discipline, its content, time allotted for the study of certain topics, basic requirements for the results of the educational activities of the undergraduate, the recommended forms and methods of teaching and upbringing. Programs-minimums for candidate exams are developed and approved by the Ministry of Education of the Republic of Belarus.

3.5. Regularities (laws) and principles of learning (training) as methodological and didactic regulatives of teaching activity

The regularities (laws) of the learning process relate to the methodological foundations and represent objectively existing, repetitive, stable, essential links between the conditions of this process and its result. The objective nature of the regularities of the learning process is expressed in the fact that they are always present in the educational process, regardless of whether the teacher is guided by them or not in his practical activities.

In the pedagogical literature there is no single approach to the interpretation and classification of the regularities (laws) of the learning process. Thus, based on the study of the works of Russian didactics,

V. M. Simonov identified the following basic regularities (laws) of learning process:

– the law of social conditionality of goals, content and methods of teaching;

– the law of the developing and (upbringing) influence of education on students;

– the law of conditionality of learning outcomes by the nature of students' activities and communication;

– the law of integrity and unity of the pedagogical process;

– the law of interrelation of theory and practice;

– the law of interrelation and interdependence of individual, group and collective learning activities.

V. V. Anisimov, O. G. Groholskaya, N. D. Nikandrov distinguish the following groups of regularities of the learning process:

1) *structural* – the determining role of learning goals in relation to the content of education; the determining role of the content of education in the learning process; the relationship between the components of the content of education and the ways of their assimilation, etc.;

2) *system (systemic)* – the relationship between learning and the social system; the interdependence of the learning process and the pedagogical consciousness of society and specific subjects of the pedagogical process; the interdependence of the learning process and the microenvironment, etc.;

3) *content* – the relationship and interdependence of the scientific, ideological and moral-value orientation of the content of the learning process; the relationship of new knowledge and new techniques in the learning process and the active mental search for solutions to problems;

4) *evolutionary* – the relationship between the variable characteristics of the learning process and the level of training of students; the interdependence of the qualitative characteristics of the learning process from its quantitative characteristics, etc.;

5) *functional* – the interdependence of the qualitative characteristics of the learning process and the preparation of students for independent mastery of social experience; the interdependence of the learning process and the preparation of students for self-regulation and evaluation of their achievements;

6) *historical* – the interrelation of the manifestation of all components of the learning process and the features of the era; the interdependence

and, as a result, the variability of learning goals and the content of education from the conditions of development of society.

N. Sedova and I. V. Shtykh distinguish two groups of regularities: **external** – characterize the dependence of learning on social processes and conditions; **internal** – establish links between the components of the learning process (goals, content, methods, tools and forms); between the nature of the teacher's activity and the activity of students; between the attitude of students to the learning process and the effectiveness of the results of this process. *External regularities are summarized as follows: "The goals, content and methods of teaching are always socially conditioned, reflecting the requirements of society to the level of education of the individual".*

As priorities, the authors formulate the following regularities:

1) learning is always connected with education;

2) the goals, content, methods, forms and tools of teaching are always interconnected;

3) the effectiveness of the educational process is mediated by the optimal choice of methods, forms and tools of teaching;

4) the more active a person is in the learning process, the more successfully this process is carried out;

5) the strength of mastering theoretical material is related to the level of its practical consolidation during the educational process;

6) the effectiveness of the results of the educational process is largely determined by the nature of the interaction between teachers and students in educational process.

The regularities of the learning process find their concrete expression in the **principles of learning**. Knowledge of the regularities (laws) of learning and personality formation is not enough to develop and implement the educational process itself. To do this, it is necessary to shift the knowledge of these laws into the plane of actual practical actions, that is, to obtain another kind of knowledge, knowledge as a guide to action. This kind of knowledge and the provisions formulated on its basis belong to the category of principle in science.

The principles of teaching arose at that stage of pedagogical science, when it began to systematize the vast experience of pedagogical practice, generalization of empirical factors of successful learning.

The principles of didactics, as defined by T. A. Ilyina – are the main provisions that should be relied upon when teaching the basics of sciences at all levels of education.

K. Sosnitsky understands the principles of teaching as the most general laws that a teacher should adhere to in the course of his didactic activity. The various classifications of teaching principles that exist in the pedagogical literature are conditioned by the various ideas underlying them.

For example, Ya. A. Komensky based on the idea of the naturalness of learning, although the very concept of "principle" was not substantiated by him. The idea of naturalness in his understanding is a natural method, or the principle of conformity to nature. Nature is one, everything in it flows gradually, without jumps, in a natural way. Similarly, the upbringing of a child as a particle of nature should be carried out in a natural way. Ya. A. Komensky attached great importance to the conscious beginning of learning. Where there is no consciousness, the teacher noted, and learning is conducted dogmatically through meaningless memorization, formalism dominates in knowledge, and the learning process itself will inevitably be mechanical and passive.

The main condition for successful learning is comprehension of the essence of objects and phenomena, their understanding by students. In The Great Didactics, Ya. A. Komensky wrote: "Properly educating youth does not mean driving into the heads of a mixture of words, phrases, sayings, opinions collected from the authors, but it means revealing the ability to understand things, so that streams (of knowledge) flow from this ability, as if from a living source".

At the same time, Ya. A. Komensky considered the main property of conscious knowledge not only to understand it, but also to use it in practice: "You will make it easier for a student to assimilate if, in everything you teach him, you show him what daily benefits it brings in the dormitory". It should be especially noted that the consciousness in learning from Ya. A. Komensky is inseparably linked with the activity of the student, with his creativity. Ya. A. Komensky identified the following classical didactic principles: consciousness and activity, visibility, consistency and systematicity, exercise and solid assimilation of knowledge.

Thus, the learning process should be based on certain principles. The following are the most important **didactic principles of teaching**:

1. The principle of scientific approach. This principle requires that the content of academic disciplines correspond to the current state of science. The material presented should contain an assessment of new scientific facts, ideas, hypotheses; reveal prospects, the main trends in the

development of a particular science. The principle of scientific approach requires the development of students' scientific search skills, familiarization with the ways of scientific organization of work, the formation of the ability to conduct a scientific dispute, prove their point of view, and rationally use scientific literature. The level of professional training of future specialists and the real possibility of applying scientific knowledge in practice depend on the implementation of this didactic principle.

2. The principle of the connection of education, upbringing and development. This principle is based on the natural connection of learning, development and education in a holistic pedagogical process. The principle is conditioned by the needs of a democratic society in a comprehensively and harmoniously developed personality. Therefore, the learning process should be aimed not only at the formation of the necessary knowledge, skills and abilities of the trainees, but also at the formation of the basic culture of the individual: moral, legal, aesthetic, physical, communication culture.

3. The principle of visibility. Psychological research has proved that the effectiveness of learning depends on the degree of involvement in the perception of all human senses. The visibility of learning is implemented by demonstrating the studied objects, illustrating processes and phenomena, observing the phenomena and processes taking place in natural conditions, labor and production activities. New opportunities for the implementation of this principle have opened up in connection with scientific and technological progress, the ability to use audio and video equipment, multimedia equipment in the learning process.

4. The principle of systematic and consistent teaching. This principle provides for a consistent arrangement of educational material according to a certain logic, reliance on previously acquired knowledge, continuity between them, consideration of interdisciplinary connections. Consistency in teaching ensures the availability of educational material, the strength of its assimilation, the gradual increase of difficulties and the development of cognitive capabilities of students.

5. The principle of accessibility. It is based on a pattern: what is available to a person is what corresponds to the amount of accumulated knowledge, skills, ways of thinking. Accessibility is determined by the age characteristics of the trainees and depends on their individual characteristics. The principle of accessibility requires taking into account the real capabilities of the trainees and the rejection of intellectual and emotional overloads that negatively affect physical and mental health.

If the content is too complicated, the level of motivation decreases, volitional efforts weaken, performance decreases. At the same time, the training should not be unnecessarily easy. It must comply with the measure of tension necessary to maintain students' activity, focus on search actions, overcoming learning difficulties.

6. The principle of activity and consciousness. The true essence of human education is deeply and independently meaningful knowledge. The involvement of students in active cognitive activity ensures the conscious assimilation of scientific information with access to practice. A conscious attitude to learning contributes to the fact that students have the opportunity to freely and flexibly operate with knowledge, transfer it to different conditions, apply it in professional activities. This principle is implemented provided that the studied material is assimilated by comparing, contrasting, classifying and generalizing, separating the main thing from the secondary one, distinguishing causes and effects. That is, to assimilate knowledge consciously means to understand the facts, to go deeper into their essence, to recognize the connections between them, to reveal internal patterns.

7. The principle of the connection of theory with practice. This principle is based on the provision: the effectiveness and quality of training are checked, confirmed and guided by practice. Practice is a criterion of truth, a source of cognitive activity and an area of application of learning outcomes. This principle implies a close connection between learning and productive work. The more the acquired knowledge interacts with life, the more it is applied into practice, the higher the consciousness of learning and interest in it is, the more successful adaptation to the conditions of modern production we observe.

The basic principles of higher education include the following:

1. The principle of orientation of training on the development of the personality of the future specialist.
2. The principle of professional orientation of training.
3. The principle of fundamental and practice-oriented learning.
4. The principle of scientific learning.
5. The principle of unity of educational and research activities of students.
6. The principle of continuity, consistency and systematic training.
7. The principle of professional education and development in training.
8. The principle of the connection of learning with self-education and the development of students' independent work skills.

3.6. Practical class

Questions for discussion

1. The subject, tasks and basic concepts of didactics of higher education.
2. The essence, functions and structure of the learning (training) process (teaching, learning as a student's activity).
3. Designing the goals and content of students' learning (training). Block-modular and competence-based approaches in the design of the content of higher professional education.
4. Educational standards in the field of higher education. Educational and program documentation of educational programs of higher education.
5. Regularities (laws) and principles of learning (training) as methodological and didactic regulatives of teaching activity.

Practical tasks

1. Illustrate the implementation of the basic didactic principles in teaching special disciplines (according to the profile of your specialty).
2. Prepare the information (table) of the official educational portals in China with a brief summary of the materials presented on them.

TOPIC 4. BASIC METHODS, FORMS AND TOOLS OF LEARNING (TEACHING) IN HIGHER EDUCATION

4.1. The concept and essence of methods and techniques of learning (teaching) at university. Classifications of learning (teaching) methods.

4.2. Traditional and active methods of learning (teaching) at university. Conditions that determine the choice and combination of learning (teaching) methods.

4.3. The main forms of learning at university (lectures, seminars, practical classes and workshops, laboratory classes).

4.4. The concept of learning (teaching) tools. Classifications of learning (teaching) tools. Didactic functions of learning (teaching) tools.

4.5. Practical class.

4.1. The concept and essence of methods and techniques of learning (teaching) at university. Classifications of learning (teaching) methods

The success of training depends not only on the proper definition of the goals and content of learning (training). It is important to determine the following: how, in what way to achieve the learning goal, to master its content. This becomes possible if the training method is chosen properly.

Method – translated from Greek means research, a way to something. In relation to *learning*, it is *a way of acquiring knowledge*. The main difference between the method and the form of training is that the *method specifies the way of acquiring knowledge and the degree of participation of the student himself*.

Currently, there is no unified approach to the role and definition of the concept of "teaching method" in pedagogy. According to I. F. Kharlamov, the teaching method is "a way of the teacher's teaching work and organizing the educational and cognitive activity of students to solve various didactic tasks aimed at mastering the studied material".

The two-sided nature of the learning (training) process, reflecting the joint activity of the teacher and the student, also determines the two-sided nature of teaching method. Teaching methods are divided into *teaching methods*, as the activity of a teacher, and *learning methods*, through which a student acquires knowledge, skills, abilities, develops and is brought up.

In the structure of the teaching method, a teaching technique (way) is distinguished. The teaching technique (way) is an element of the method, its component part; these are separate operations of the mental or practical activity of the teacher, which increase the effectiveness of the teaching method. For example, in the *method* of organizing students' work with a textbook and a book, the following *techniques* are distinguished: taking notes, drawing up a text plan, preparing abstracts, quoting, making an abstract, reviewing, writing a dictionary of the topic covered, drawing up a schematic model of the text.

Teaching techniques can be divided into:

– techniques for the formation and activation of individual operations of thinking, attention, memory, perception, imagination (illustration, demonstration, presentation, text creation, riddles, puzzles);

– techniques for creating problem-solving, searching situations in the mental activity of students (brainstorming, problem question);

– techniques for activating experiences, feelings related to the study of educational material. (When organizing training, students experience special emotions about grades and marks. Evaluation as a verbal characteristic of the results of the student's actions ("well done", "you can do better", "good job", "you will succeed"), being as variable and diverse as possible, is always aimed at the personality of the child.);

– management techniques in the educational process of student relationships (collective and personal) ("I say – you say – we say" is that there is time in the classroom when the teacher speaks and students listen; there is time when students talk to each other; and there is time when the whole group communicates and listens to all opinions. This technique, in addition to managing interaction in the classroom, allows you to test the knowledge of students).

There are many different teaching methods. Some of them have similar features, common features, which allows you to combine them into groups. This is how the classification of teaching methods arises. Classification of teaching methods is the distribution, ordering of teaching methods into groups, subgroups, depending on the selected attribute.

Currently, there is no unified approach to the classification of teaching methods in pedagogy, and as a result, there are a number of classifications of teaching methods. Each of them considers certain aspects of the learning process; they do not contradict each other, but allow you to see the learning process from different sides (tab. 4.1).

Table 4.1

Classification of learning (teaching) methods

Authors	Basis of classification	Learning (teaching) methods
E. Ya. Golant, S. I. Petrovsky	Source of transmission and perception of educational information	– verbal (explanation, story, conversation, lecture, discussion, instruction); – visual (illustration, demonstration, observation, video method); – practical (exercises, laboratory and practical work (classes)
M. A. Danilov, B. P. Esipov	Didactic goals. The sequence of acquiring knowledge at a specific stage of a class	– acquisition of knowledge; – formation of skills and abilities; – consolidation (strengthening) of the studied material; – application of acquired knowledge; – control
Yu. K. Babansky	The way of organizing cognitive activity	*3 groups of methods* – *organization and implementation of educational and cognitive activities* (verbal, logical, gnostic, methods of self-management by educational actions); – *stimulating and motivating learning* (cognitive games, discussions, encouragement or censure); – *control and self-control* (methods of oral and written control, laboratory work)
M. N. Skatkin, I. Ya. Lerner	The type (nature) of cognitive activity. The nature of cognitive activity reflects the level of independent activity of students	– explanatory and illustrative (informational and reproductive); – reproductive (story, explanation, lecture, textbook work); – problem-solving (solving problematic questions, situations); – partially-search (heuristic) (mastering individual stages, elements of the process of scientific search, cognition); – research (the problem is solved by students independently, but under the guidance of a teacher)

Let us dwell in more detail on the last classification proposed by I. Ya. Lerner and M. N. Skatkin. The authors believe that since the success of learning (teaching) depends crucially on the orientation and internal activity of students, the nature of their activities, it is the nature of the activity, the degree of independence, the manifestation of creative abilities that should serve as an important criterion for choosing a method. They proposed five learning (teaching) methods, and in each of the subsequent ones, the degree of activity and independence in the activities of students increases:

1. **Explanatory and illustrative method.** Students receive knowledge at a lecture, from educational or methodological literature, through an on-screen manual in a "ready-made" form. Perceiving and comprehending facts, assessments, conclusions, students remain within the framework of reproductive (reproducing) thinking. At university, this method finds the widest application for transmitting a large array of information.

2. Reproductive method. It includes the application of the studied material on the basis of a sample or rule. The activity of students is algorithmic in nature, that is, it is carried out according to instructions, prescriptions, rules in similar situations similar to the sample shown.

3. Problem-solving method. Using a variety of sources and tools, the teacher, before presenting the material, poses a problem, formulates a cognitive task, and then, revealing a system of evidence, comparing points of view, different approaches, shows a way to solve the task. Students, as it were, become witnesses and partners of the scientific search. Both in the past and in the present, this approach is widely used.

4. Partially-search (heuristic) method. It consists in organizing an active search for solutions to cognitive tasks put forward in training (or independently formulated), either under the guidance of a teacher, or on the basis of heuristic programs and instructions. The process of thinking acquires a productive character, but at the same time it is gradually directed and controlled by the teacher or the students themselves on the basis of work on programs (including computer) and textbooks. This method, one of the varieties of which is heuristic conversation, is a proven way to activate thinking, arouse interest in cognition at seminars and colloquiums.

5. Research method. After analyzing the material, setting problems and tasks, and a brief oral or written briefing, students independently study literature, sources, conduct observations and measurements, and perform other search actions. Initiative, independence, creative search

are manifested in research activities most fully. Methods of educational work directly develop into methods of scientific research.

There is no universal classification of learning (teaching) methods, because the learning process is a dynamic structure. In the living pedagogical process, methods receive their development, take on new properties. The teacher should follow the path of their universal combination and application in order to achieve a high degree of adequacy of the educational tasks being solved. At each stage of the educational process, some methods occupy a dominant, others a subordinate position. Some methods to a greater extent, others to a lesser extent provide a solution to the set educational tasks (tab. 4.2).

Table 4.2

Learning (teaching) methods

№	Groups of methods	Specific methods	Functions of methods
1	2	3	4
1	*Information-theoretical methods*	– oral logically holistic presentation; – oral dialogical structured presentation (conversation); – explanation; – narration (storytelling); – consultation; – audio video demonstration; – discussion	– formation of new scientific knowledge; – development of analytical thinking, memory; – formation of views, beliefs, world outlook; – education (upbringing) of; – personal and professional qualities
2	*Practical and operational methods*	– exercise; – problem solving; – algorithm; – "do as I do"; – experience; – experiment; – pedagogical game (cognitive or professional)	– formation of skills; – development of general and pedagogical abilities; – examination and consolidation of knowledge; – education (upbringing) of personal and professional qualities

Table 4.2 (end)

1	2	3	4
3	*Search and creative methods*	– observation; – experience; – experiment; – "brainstorming"; – "think, listen, suggest"; – creative dialogue; – analysis of specific situations (problematic, common, typical); – insight; – case study	– formation of analytical thinking; – development of creativity; – formation of scientific abilities; – development of cognitive and scientific activity
4	*Methods of students' independent work*	– reading (working with a textbook and other educational and teaching materials); – expertise; – taking notes; – exercise; – solving problems and problematic situations; – experience; – experiment	– development of independent thinking; – developing perseverance (persistence); – formation of skills; – development of interest in self-education; – education (upbringing) of personal and professional qualities
5	*Control and evaluation methods*	– preliminary exam; – "chamomile"; – oral presentation; – control activities; – experience; – exercise; – testing; – survey	– formation of responsibility, perseverance (persistence); – examination and consolidation of knowledge; – formation of skills; – education (upbringing) of personal and professional qualities

4.2. Traditional and active methods of learning (teaching) at university. Conditions that determine the choice and combination of learning (teaching) methods

The main purpose of traditional learning (teaching) methods is to inform students of new knowledge and bring up-to-date information on any discipline to them. These methods are based on informative and illustrative activities on the part of the teacher and reproductive activities on the part of students (fig. 4.1).

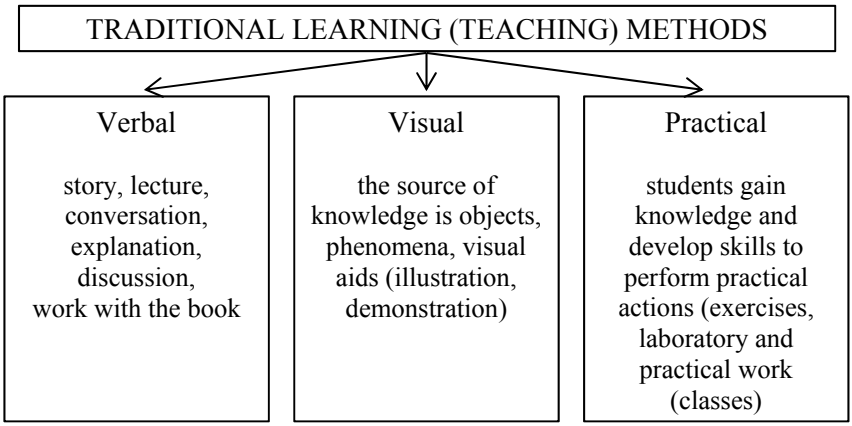


Fig. 4.1. Traditional learning (teaching) methods

Students get acquainted with information unknown to them before, and in the process of comprehension they use new ways of action and reasoning. Then, solving the relevant tasks, apply the acquired knowledge in practice.

Verbal methods take a leading place in the system of **traditional learning (teaching) methods** at university. The most common **verbal methods** in higher education include a lecture, discussion, work with a book, etc.

A lecture is a monological way of presenting voluminous material. It is used, as a rule, in specialized secondary and higher educational institutions. The lecture presentation of the material ensures the completeness and integrity of its perception and assimilation. Students are involved in the process of active mental actions and dynamic "getting used" to the reality of the material being presented (factors, phenomena, events, historical epochs,

positions of heroes, the world of thoughts and ideas of heroes, etc.). The ability of memorization is enhanced. Steady voluntary attention, purposefulness, and note-taking skills are developing and forming. The relevance of using lectures in modern conditions increases due to the use of block study of new educational material on topics or large sections.

At university, depending on the place and role in the educational process, the following types of lectures are distinguished (tab. 4.3).

Table 4.3

Types of lectures at a higher educational institution

Type	Brief description
1	2
Introductory lecture	It is an introduction to the academic discipline. The main objectives of the course are outlined, its content is briefly characterized, the current level of development of this science and its future are revealed. Students get an idea of the forms of classes in the study of the subject and forms of control, about the nature of their independent work
Overview lectures	They are presented at graduation courses before state exams, as well as for part-time students, when an analysis of new problems that have appeared in science recently is needed. The main purpose is the orientation of students in the content of the course, the volume of educational material, assistance in its independent study
Final (summary) lectures	They are conducted after studying the entire discipline. They deepen and generalize previously studied knowledge, logically systematize all educational material, reveal its professional orientation
Lecture-information	It is focused on presenting and explaining to students scientific information that is subject to comprehension and memorization. This is the most traditional type of lectures in the practice of higher education
Problem-solving lecture	The teacher includes a series of problematic questions in the outline of the entire lecture. As a rule, these are complex, key issues for the topic. Students are invited to reflect and answer them as they are posed. The method of problem-solving presentation activates students, promotes the development of analytical thinking, enlivens the lecture

Table 4.3 (continued)

1	2
Lecture-discussion	It is conducted on topics of a complex, hypothetical nature with an ambiguous interpretation or solution. There are methodological options for conducting a lecture-discussion. *Option one*: students at the very beginning of the lecture ask the teacher questions on a previously announced topic. He answers them, unfolding the content of the material, at the same time offers students new questions, reflects, thereby involving them in the discussion. The teacher creates a favorable atmosphere for the perception of the material, acting either as a participant in the discussion, or as a lecturer. *Option two*: the discussion does not take up the time of the lecture, but only part of it, usually at the end. The teacher offers students 2–3 questions on the topic of the lecture, which are considered in a discussion form based on their previous knowledge
Lecture-visualization	Visual form of presentation of lecture material with the help of technical teaching tools/means. This is a detailed or brief commentary on the viewed visual materials (natural objects (people in their actions and deeds), drawings, photographs, slides, diagrams, tables, graphs, models)
Binary Lecture	A kind of lecture in the form of a dialogue between two teachers (either as representatives of two scientific schools, or as a scientist and a practitioner, a teacher and a student)
Lecture with planned errors (mistakes)	It is used in senior courses when students have a sufficient degree of theoretical training. The goal is to activate students, keep them in suspense throughout the lecture, and develop attentiveness. The teacher purposefully puts a certain number of errors (mistakes) of a meaningful or methodological nature into the text of the lecture. Students, perceiving educational information, note errors (mistakes) if they are found. Then, at the end of the lecture, errors (mistakes) are examined and analyzed, as a result, students learn the correct information. The value of this type of lecture lies in the stimulating, control and diagnostic function. However, not all teachers perceive this type of lecture positively: students can assimilate unreliable information, which will be difficult to get rid of later

Table 4.3 (end)

1	2
Lecture-consultation	*The first option* is "questions and answers". The lecturer answers students' questions throughout the section or the entire course during the lecture time. *The second option* is "questions-answers-discussion". Presentation of new educational information by the lecturer, posing questions and organizing a discussion in search of answers to the questions posed

The given classification of lectures testifies to the diversity of this form of educational work in modern higher education. You should not get carried away with any one type of lectures, but you should use them taking into account didactic goals, the professional intention of the teacher. New types of lectures require more serious fundamental training, a higher methodological culture of the teacher.

Working with a textbook and a book is the most important method of teaching. There are a number of techniques for independent work with printed sources. The main ones are:

1. *Note-taking* – summary, a brief record of the content of what was read. Note-taking is conducted from the first (from yourself) or from a third person. Note-taking in the first person better develops independent thinking.

2. *Drawing up a text plan.* The plan can be simple and complex. To make a plan, after reading the text, it is necessary to break it into parts and title each part.

3. *Thesis* – a summary of the main thoughts of the material read.

4. *Quoting* is a word for word excerpt from the text. The output data must be specified (author, title of the work, place of publication, publisher, year of publication, page).

5. *Annotation* is a brief summary of the contents of what has been read without loss of essential meaning.

6. *Reviewing* is writing a short review expressing your attitude to what you have read.

7. *Drawing up a reference* – information about something received after searches. References can be statistical, biographical, terminological, geographical, etc.

8. *Drawing up a formal logical model* – a verbal and schematic representation of the material read.

9. *Compilation of a thematic thesaurus* – an ordered set of basic concepts for a section, topic.

10. *Compilation of a matrix of ideas* – comparative characteristics of homogeneous objects, phenomena in the works of different authors.

Visual teaching methods are methods in which the assimilation of educational material is significantly dependent on the visual aids and technical means used in the learning process. Visual methods are used in combination with verbal and practical teaching methods. They can be divided into two large groups: the method of illustrations and the method of demonstrations.

The illustration method involves showing students illustrative manuals: posters, tables, paintings, maps, sketches on the blackboard, etc.

The method of demonstrations is usually associated with the demonstration of devices, experiments, technical installations, films, filmstrips, etc.

This division of visual aids into illustrative and demonstration is conditional. It does not exclude the possibility of attributing individual visual aids to both the illustrative and demonstration groups. The introduction of new technical means into the educational process (television, video recorders, computers) expands the possibilities of visual teaching methods.

When using visual teaching methods, a number of requirements must be observed:

– the applied visibility must correspond to the age of the students;

– visibility must be used in moderation and it should be shown gradually and only at the appropriate moment of the training session;

– observation should be organized in such a way that all students can clearly see the subject being demonstrated;

– it is necessary to clearly highlight the main points that are essential when showing illustrations;

– it is necessary to think in detail about the explanations given during the demonstration of phenomena;

– the demonstrated visibility must be precisely consistent with the content of the material;

– it is necessary to involve the students themselves in finding the desired information in a visual aid or demonstration device.

Practical methods of teaching are based on the practical activities of students. These methods form practical skills and abilities. Practical methods include exercises, laboratory and practical work (classes).

Exercises. Exercises are understood as repeated (multiple) performance of a mental or practical action in order to master it or improve its quality. Exercises are used in the study of all disciplines and at various stages of the educational process. The nature and methodology of the exercises depends on the specifics of the discipline, the specific material, the issue being studied and the age of the students.

By their nature, they are divided into oral, written, graphic and educational-labor. When performing each of them, students perform mental and practical work.

Let's consider the features of the application of exercises.

Oral exercises contribute to the development of logical thinking, memory, speech and attention of students. They are dynamic and do not require time to keep records.

Written exercises are used to strengthen (consolidate) knowledge and develop skills in their application. They contribute to the development of logical thinking, the culture of writing, independence in work. Written exercises can be combined with oral and graphic exercises.

Graphic exercises include students' work on drawing up diagrams, drawings of graphs, technological maps, making albums, posters, stands, making sketches during laboratory and practical work, excursions, etc. Graphic exercises are usually performed simultaneously with written ones and solve common educational tasks. Their application helps students to better perceive, comprehend and memorize educational material, promotes the development of spatial imagination. Graphic works, depending on the degree of independence of students in their performance, can be reproducing, training or creative in nature.

Exercises are effective only if a number of requirements for them are met: a conscious approach of students to their implementation; compliance with the didactic sequence of exercises – first exercises for learning and memorizing educational material, then – for reproduction → application of previously learned material → for independent transfer of the studied material to non-standard situations → for creative application, which ensures the inclusion of new material in the system of already acquired knowledge, skills and abilities. Problem-searching exercises are also extremely necessary, which form students' ability to guess, intuition.

A laboratory (*work*) *class is* the study of any phenomena by students with the help of special equipment. Laboratory work is carried out in an illustrative (demonstration experiment) or research plan.

Practical work (*classes*) are conducted after studying large sections, topics and are generalizing in nature. They can be conducted not only in the classroom, but also outside the university (measurements on the ground, work at a factory, construction site, etc.). A special type of practical teaching methods are classes with training machines-simulators and tutors.

Traditional learning (training), which is the formation of knowledge, skills and abilities according to the scheme: learning new material – consolidation (strengthening) – control – evaluation, has a number of disadvantages:

1) focus on the transfer, and not on the independent development of the necessary knowledge by students;

2) the predominance of verbal methods of presentation of the material;

3) a single average amount of knowledge acquired by students;

4) a large proportion of the knowledge received by students in verbal form;

5) the predominance of the load on the memory of students, etc.

Nevertheless, for decades these methods (traditional teaching methods) have been actively used and continue to be used by teachers.

In modern conditions, when the volume of scientific information is significantly increasing, and old knowledge is rapidly becoming obsolete, the former educational paradigm, based on the fact that it is possible to determine a sufficient stock of knowledge for successful life and transfer it to the student, has exhausted itself.

In the new environment, when the constant work of a person with continuously updated knowledge becomes one of the leading activities, the transition to a self-educational paradigm is relevant. All this leads to the development of new types and forms of education.

Active learning involves the use of such a system of methods, which is mainly aimed not at the presentation of ready-made knowledge by the teacher, their memorization and reproduction, but at the independent mastery of knowledge and skills by students in the process of active thinking and practical activity.

Active methods are methods that encourage students to actively think and practice in the process of mastering the educational material. The peculiarities of active teaching methods are that they are based on the motivation for practical and mental activity, without which there is no progress in mastering knowledge. The use of such methods in the

activity of a teacher allows students to give not only knowledge, but also forms cognitive interests and abilities, independence, creative thinking, skills and abilities of mental work.

These include: problem-solving, programmed, distance learning, etc.

I. Problem-solving learning (training) sets the following tasks:

1) development of students' thinking and abilities, development of creative skills;

2) assimilation by students of knowledge, skills acquired during active search and independent problem solving, as a result of this knowledge, skills are more durable than with traditional training;

3) education of an active creative personality of a student who is able to see, pose and solve non-standard professional problems.

The success of this type of learning (training) depends on the "problem level", which is determined by:

1) the degree of complexity of the problem deduced from the ratio of the known and unknown to students within the framework of this problem;

2) the share of creative participation (personal and collective) of students in the process of solving the problem.

There are three main methods of problem-solving learning: problem-presentation, partially-search activity and independent research activity.

The simplest method is a *problem-solving presentation* of educational material at a lecture, when the teacher poses problematic questions, builds problematic tasks and solves them himself; students are only mentally involved in the process of finding a solution. For example, at the beginning of the lecture "On plant life" the problem is posed: "Why do the root and stem grow in opposite directions?" The teacher does not give a ready answer, but tells how science went to this truth, reports hypotheses, that is, experiments that were done to test hypotheses about the causes of this phenomenon.

Partially-search method gradually introduces students to independent problem solving; during problem seminars, practical classes, heuristic conversations, students solve problems under the guidance of a teacher. The teacher comes up with a system of problematic questions, the answers to which are based on the existing knowledge base, but are not contained in previous knowledge, that is, questions should cause intellectual difficulties for students and purposeful mental search. The teacher must come up with possible "hints" and questions with an obvious answers, he sums up the main thing himself, based on the answers of the students.

The *research method* assumes that students independently formulate a problem and solve it (in a course or thesis or in research) with the subsequent supervision of the teacher.

The principle of problem-solving content of training can be implemented in the form of *business learning games* (*Game-Based Learning*). The business learning game is a form of recreating the subject and social content of the future professional activity of a specialist, modeling those systems of relations that are characteristic of this activity, modeling professional problems, real contradictions and difficulties experienced in typical professional problem-solving situations.

The business learning game solves "serious" tasks for the development of a specialist's personality, students acquire knowledge and skills in the context of profession, acquire both professional and social competencies (skills of interaction in a team, skills of professional communication and people management). But this "serious" activity is implemented in a playful form, which allows students to intellectually and emotionally liberate themselves, show creative initiative.

A business learning game in terms of difficulty can be of the following types:

1. Analysis of specific situations (*case-study*). Case-study is based on learning by solving specific tasks – situations (solving cases). The main purpose of this method is to develop a practical solution to a given situation through joint (by all members of the student group) analysis, evaluation of the proposed algorithms and selection of the best in the context of the problem.

Cases are educational specific situations specially developed on the basis of factual material for the purpose of subsequent analysis in foreign language classes. The sources of cases can be public life, education and science of the country of the studied language.

As components of cases, there are: a description of a specific situation, tasks for the case, additional information necessary for the analysis of the case. The description of the situation must contain a problem or a number of direct or indirect difficulties, contradictions, hidden tasks to solve.

The technology of working with the case in the educational process includes the following stages:

1) individual independent work of students with case materials (familiarization with a given situation; analysis of information; search for solutions);

2) work in small groups to adopt a common solution to the problem (identification of advantages and disadvantages of each proposed option; evaluation of alternatives);

3) presentation of the results of the work of small groups during the general discussion (within the framework of the study group);

4) evaluation of participants;

5) summing up.

At the same time, the teacher acts as a moderator, ensures freedom of expression, maintains a good emotional background, clarifies and asks additional questions, records answers, and also evaluates the contribution of each of the students to the analysis of the situation.

2. Role-playing – students receive initial data on the situation, and then take on the performance of certain roles. The roles are performed in the presence of other students, who then evaluate the actions of the participants in the situation, their independent decisions, depending on the conditions of the scenario, the actions of other performers and depending on their own decisions previously made, that is, when playing roles, it is impossible to fully predict the situations in which one or another performer finds himself; this training method is used to develop practical professional and social skills.

3. A full-scale business learning game simulating professional activity and the consequences of professional decisions made (often using a computer to calculate and analyze the near and distant consequences of decisions made).

II. Programmed (computer) learning (training) is most effective in teaching disciplines based on factual material and repetitive operations that have unambiguous, clear formulas, algorithms of actions.

As practice shows, a computer in the educational process can be used in the following functions:

1) as a means of organizing cognitive activity through external (objective) and internal (mental) modeling;

2) as a means of implementing the most complete system of educational activities, as well as their control and correction;

3) as a means of creating new forms of the educational process, modeling joint activities such as "teacher – computer – student", "computer – student", "computer – group of students", "teacher – computer – group of students" (the most effective form).

The use of computers in the educational process contributes to the visualization (visibility) of educational content and algorithmization of educational activities. The main principles of computer learning are: the dosage of educational material; active independent work of the student; constant control of assimilation; individualization of the pace of learning, the volume of educational material, etc.

III. Distance learning. The rapid pace of development of computer and communication technologies, as well as the rapid introduction of the global computer network Internet into everyday life have led in recent decades to the development of distance education, which currently complements and expands the traditional forms of organization of the educational process. *Distance learning* is understood as education implemented mainly with the use of information and telecommunication technologies with indirect (at a distance) or not completely mediated interaction between the student and the teaching staff. Such a form of mastering the material is offered at any of the available levels of education: from higher education to all kinds of courses and trainings. With the help of distance learning systems, students have constant access to educational material, as well as consulting and conducting discussions, testing knowledge and skills. When using distance learning technologies, an educational institution provides access for students, teaching staff and support staff to an educational and methodological complex (on paper or electronic media), including: the curriculum of the educational institution, the curriculum of the student, the curriculum of the subject (discipline, training course), a textbook on the subject (discipline, training course), practical manual, test materials for quality control of material assimilation, methodological recommendations for the student on the study of an academic subject (discipline, training course), the organization of self-control, current control, educational (didactic) manuals and task books. Distance learning should also include the implementation of all control measures and laboratory and practical classes provided for by the state educational standard and the curriculum for the relevant field of training. *The characteristic features of distance learning* are modularity, a change in the role of the teacher (largely associated with the separation of functions of course developers, tutors, etc.), the use of specialized technologies and learning (teaching) tools, taking into account the individual characteristics of students, etc. *The advantages of distance learning* are the following: the opportunity to

study at a convenient time, in a convenient place and at your own pace; simultaneous access to many sources of educational information (electronic libraries, data banks, knowledge bases, etc.) of a large number of students; effective use of training areas, technical means, concentrated presentation of educational information reduces the cost of training specialists; equal opportunities for education regardless of place of residence, health status, financial situation of the student.

The choice of learning (teaching) methods depends on:

– the general goals of education, upbringing and development of students and the leading attitudes of modern didactics;

– the features of the content and methods of this science and the subject being studied, the topic;

– the specifics of the teaching methodology of a particular academic discipline and the requirements for the selection of general didactic methods determined by its specifics;

– the purpose, objectives and content of the material of a particular lesson/class;

– the time allotted for the study of a particular material;

– the age characteristics of the students; on the level of their real cognitive capabilities;

– the level of preparedness (preparation, readiness) of students (education, upbringing and development);

– the material equipment of the educational institution, the availability of equipment, visual aids, technical means;

– the capabilities and characteristics of the teacher, the level of theoretical and practical preparedness, methodological skills, his personal qualities.

Teaching methods by themselves can be neither good nor bad, their system is necessary. The teaching methods, by which the expected results are achieved, while remaining fundamentally the same, vary depending on a variety of circumstances and conditions of the learning process. Pedagogical mastery comes only to the teacher who seeks and finds the optimal correspondence of methods to the patterns of age and individual development of students. Being very flexible and subtle instruments of touching the individual, at the same time, teaching methods are always addressed to the team, implemented taking into account its dynamics, maturity, organization.

4.3. The main forms of learning at university (lectures, seminars, practical classes and workshops, laboratory classes)

The form in relation to the activity determines the nature of the activity.

There are two interrelated terms: forms of education and forms of learning.

In accordance with the Code of the Republic of Belarus on Education (Article 16), the following **forms of education** are distinguished:

– full-time (day, evening);
– correspondence;
– distance;
– application.

The full-time form of education is learning (training) and upbringing, providing for the permanent personal participation of the student in regular classes and attestation (certification) organized by the educational institution.

Full-time education is a type of full-time education, when education is the main type of employment of the student.

Evening form of education is a type of full-time form, when education is combined, as a rule, with another type of student employment.

The correspondence form of education is education and upbringing, providing mainly for the independent mastering of the content of the educational program by students participating personally only in a limited number of training sessions (classes) and certification organized by the educational institution.

The distance form of education is education and upbringing, providing mainly for the independent mastering of the content of the educational program by students and the interaction of the student and teaching staff is based on the use of modern communication and information technologies.

The main differences between distance education and full-time education are the following: education at the place of residence or work, therefore, the distributed nature of the educational process; flexible schedule of the educational process, which can either be completely free with open education, or be tied to a limited number of control points (exams, on-line sessions with a teacher), or group classes, as well as laboratory work on equipment (possibly remote); contacts with the teacher (tutor), mainly carried out through telecommunications.

Distance education differs from the correspondence form of education in the following: constant contact with the teacher (tutor), the possibility of prompt discussion of emerging issues with him, usually with the help of telecommunications; the possibility of organizing discussions, collaboration on projects and other types of group work during the course and at any time (in this case, the group may consist of students living compactly in one area, or be distributed). In this case, students also contact the teacher (tutor) via telecommunications; transfer of theoretical materials to students in the form of printed or electronic textbooks, which allows either to completely abandon the introduction sessions with arrival at university, or significantly reduce their number and duration.

In recent years, traditional distance education has moved to a qualitatively new stage of its development, which is characterized by active communication such as "student – teacher (or tutor)", "student – student" and "student – the best experts or the best world sources of knowledge on this issue", provided by the most modern network communication technologies, and a new paradigm of education, known as "active learning", when the student himself controls his education, that is, the student independently selects the list of required training courses, pace, time and place of study, information sources, including international network information systems, multimedia on-line computer textbooks, on-line knowledge and data bases, on-line libraries, consultations with the best experts in the field.

Application is training and education, providing mainly for the independent development of the content of the educational program by the student, his personal participation only in the certification organized by the educational institution.

The form of learning is an organized interaction between a teacher and a student in order to transfer and obtain certain knowledge, skills and abilities. At the same time, it should be emphasized that the basis of any form is the leading method of learning (teaching).

Training sessions (classes) at university, as a rule, are held in the form of lectures, consultations, seminars, practical classes, laboratory work, tests and independent work, colloquiums, etc. The technology of conducting training sessions is determined by many factors. From the point of view of educational process management, the choice of technologies is determined by the university teacher. Nevertheless, the

set of didactic means chosen to achieve the educational goal largely depends on the form of learning (teaching).

The following *forms of learning* are distinguished:

– *general* (frontal, individual, group, class-lesson, evening, full-time, correspondence);

– *specific* (lesson, lecture, seminar, practical classes, consultations, additional classes, elective classes, homework, excursion, industrial practice, tests, exams, etc.).

The main organizational form of learning (teaching) at university aimed at the primary acquisition of knowledge is *a lecture*. The main purpose of the lecture is to provide a theoretical basis for learning, to develop interest in educational activities and a specific academic discipline, to form students' guidelines for independent work on the course. Teachers distinguish three main types of lectures used in full-time learning (teaching) for the transfer of theoretical material: *introductory, informational and overview* lectures.

Practical classes are designed for in-depth study of the discipline. In these classes, the theoretical material is comprehended, the ability to convincingly formulate one's own point of view is formed, professional skills are acquired.

Laboratory work (classes) allows you to combine theoretical and methodological knowledge and practical skills of students in the process of research activities.

One of the main organizational forms of educational activity is *seminars*, which form a research approach to the study of educational and scientific material. The main purpose of the seminars is to discuss the most complex theoretical issues of the course, their methodological and methodical elaboration.

The organization of students' research work (R&D) in full-time education traditionally boils down to conducting scientific student seminars, conferences, performing educational and research tasks, writing term papers and graduation papers and projects.

Independent work of students. Extracurricular independent work of students refers to information-developing teaching methods aimed at the primary acquisition of knowledge. The ratio of time allocated to classroom and independent work, on average, is 1:3.5 worldwide. Consultations involve an increase in the volume of independent work of students. It is necessary to organize constant support of the educational process by teachers.

Quality control of knowledge. Pedagogical control is one of the main forms of organization of the educational process, since it allows checking the results of educational and cognitive activity of students, pedagogical skills of the teacher and the quality of the created training system. Current control helps to differentiate students into successful and unsuccessful, motivates learning. The *current control* can be organized by means of an oral survey, control tasks, verification of self-control data. *Thematic control* involves evaluating the results of a specific topic or section of the program. It can be organized using the same pedagogical means as the current control – with the help of tests, control papers, as well as abstracts, colloquiums, etc. *Boundary and final control* can be organized in the form of tests, essays, creative works, problem solving, final exam, etc.

4.4. The concept of learning (teaching) tools. Classifications of learning (teaching) tools. Didactic functions of learning (teaching) tools

The tools of learning (teaching) are the speech and actions of the teacher, as well as any material objects used by the teacher and the subject (student) of the teaching during learning (training). Learning (teaching) tools are understood, as a rule, auxiliary materials and tools, various equipment and real objects that allow the teacher to achieve their goals more successfully and rationally, while solving certain didactic tasks. Learning tools are an integral part of the learning method. Their main purpose is to speed up the process of assimilation of educational material.

The choice of teaching tools is determined by: the objectives of the training session (classes); the content of the learning material; the teaching methods used; the preferences of the teacher, etc.

Functions of learning (teaching) tools:

1) cognitive (learning tools serve for direct cognition of reality, provide transmission of more accurate and complete information about the studied object and phenomenon);

2) forming (forms cognitive abilities, feelings and will of students, their emotional sphere);

3) didactic (it is an important source of knowledge and skills, facilitates the verification and consolidation of educational material, activates cognitive activity).

In modern pedagogical science, there is no strict classification of teaching tools. All teaching tools are divided into material and ideal. The *material tools* include: textbooks; teaching aids; didactic materials; primary source books; pedagogical tests; models; visual aids; technical means and laboratory equipment. Generally accepted sign systems are accepted as *ideal teaching tools*, such as: language (oral speech); writing (written speech); a system of symbols of various disciplines (musical notation, mathematical apparatus, etc.); cultural achievements or works of art (painting, music, literature, etc.); pedagogical software products; organizing and coordinating the activities of the teacher; the level of his qualifications and internal culture; methods and forms of organization of educational activities; the entire system of education existing in this educational institution, the system of general university requirements.

At the same time, it is emphasized that *learning becomes effective only when material and ideal tools are used together, complementing and supporting each other.* The learning tools are also divided into:

1) by the nature of the impact on the students:

– visual (objects, layouts, maps, slides, multimedia complex, etc.);

– auditory (radio, music center, etc.)

– audiovisual (television, information and computer presentations, movies, etc.);

2) by the degree of complexity:

– simple (textbooks, maps, models, etc.)

– complex (computers, mechanical visual aids, language labs, etc.);

3) by origin:

– natural (for example, plants, stones, etc.);

– symbolic (represent reality with the help of symbols, signs, drawings, diagrams, maps, etc.);

– technical (visual, auditory, audiovisual).

*Educational and methodical complex (*teaching and learning pack*) as a tool of teaching.* EMC can be defined as a set of various didactic teaching tools, including printed manuals, technical learning tools (TLT), training programs and telecommunications tools designed to manage the independent work of students. Structural components of the educational and methodological complex: paper publications; online electronic educational publications (electronic textbook); computer training systems in hypertext and multimedia versions; audio educational and informational materials; video educational and informational materials; simulators, that

is, training exercises (including those with remote access); information databases and knowledge; electronic libraries; learning tools based on computer educational environments, etc.

4.5. Practical class

Questions for discussion

1. The concept and essence of methods and techniques of learning (teaching) at university. Classifications of learning (teaching) methods.
2. Lecture as the leading form of organization of the learning process at university. Functions and requirements for the preparation and conduct of the lecture. Types of lectures.
3. The content and structure of the lecture. Criteria for the selection of lecture educational material. Evaluation of the lecture quality. Pedagogical interaction of the lecturer with the audience.
4. A seminar as the most important form of deepening theoretical knowledge and formation of professional skills. Types, structure and forms of organization of seminars.
5. Practical and laboratory classes. Requirements for their organization and conduct.
6. The notion of an educational and methodical complex (teaching and learning pack) as a tool of teaching and its constituent components. Electronic educational and methodical complex (teaching and learning pack).

Practical tasks

1. Investigate the following. What learning (teaching) methods are more preferable among:

a) teachers of social studies and the humanities in comparison with teachers of special disciplines;

b) novice teachers in comparison with teachers who have a high level of pedagogical skill. Explain the reasons for these preferences.

2. Analyze the advantages and limitations of various types of lectures (on an academic discipline in accordance with the profile of your specialty).
3. Make a table in which you will reflect the main characteristics of the teaching methods used in higher education in China.

Situational tasks

1. The teacher cannot start the lecture due to the noise in the classroom. What should he do?

2. In practical classes, one of the students sitting at the first desk studies lecture notes or a textbook on another subject. To the teacher's remark, he replies that he did not have time to prepare at home, but "he hears everything" in class. During the semester, the student did not miss classes, performed tests satisfactorily, but did not answer the teacher's questions, because he was "busy". Analyze the situation from the position of a teacher. Your actions.

3. During a practical class, one of the students defiantly reads a book while the others complete the task. When asked by the teacher why he does not work with the others, he answers that he does not want to. The next class is the same. The teacher says that if the student is not interested, then... What teacher's reaction in such a situation will be the most appropriate?

TOPIC 5. INDEPENDENT AND RESEARCH WORK OF STUDENTS

5.1. The concept of students' independent work, its types, levels, forms.

5.2. The essence and role of students' research work (R&D) in the preparation of a future specialist. Forms and methods (techniques) of organizing students' research work at university.

5.3. Course and diploma project as a type of students' independent educational research activity.

5.4. The system of practical training of future specialists at university. Various types of internship in the system of students' professional training at university.

5.5. Practicfl class.

5.1. The concept of students' independent work, its types, levels, forms

In the modern socio-cultural situation, there is a need for training a competitive personality who is ready to independently replenish and update knowledge, be responsible, able to act in life and professional situations characterized by a high degree of dynamism and uncertainty. In this regard, there is a need to train a future specialist in independent search and processing of the necessary information, the ability to accumulate and structure the acquired knowledge, apply it in further professional activities.

Independent work is a type of individual or collective educational activity performed by students without direct contact with the teacher.

The main goal of student's independent work (SIW) is to improve the professional training of specialists, aimed at forming an effective system of fundamental and professional knowledge, skills and abilities that they could freely and independently apply in practice.

During the organization of students' independent work (SIW), the teacher solves the following tasks:

– to deepen and expand their professional knowledge;
– to form their interest in educational and cognitive activities;
– to teach students to master the techniques of the cognition process;
– to develop their independence, activity, responsibility;
– to develop the cognitive abilities of future specialists.

Depending on the place and time of the students' independent work, the nature of its management by the teacher and the method of monitoring its results, it is divided into the following types:

– independent work during the main classroom classes (lectures, seminars, laboratory work);

– independent work under the supervision of a teacher in the form of scheduled consultations, creative contacts, tests and exams;

– extracurricular independent work, which the student organizes at his own discretion, without direct supervision by the teacher (preparation for lectures, laboratory and practical classes, tests, colloquiums, etc.).

In general, **the student's independent work, under the supervision of a teacher** is a pedagogical support for the development of targeted readiness for professional self-education and is a didactic means of the educational process, an artificial pedagogical structure of the organization and management of students' activities.

In modern pedagogical literature, there are two levels of independent work:

1) students' independent work managed by a teacher;

2) the independent work itself (without direct supervision by the teacher (preparation for lectures, laboratory and practical classes, tests, colloquiums, etc)).

It is the first level that is most significant, since it assumes the presence of special methodological instructions from the teacher, following which the student acquires and improves knowledge, skills and accumulates practical experience.

The management of SIW is, first of all, the ability to optimize the process of combining these two parts. The manageable SIW should be at least 20 % of the total time allocated according to the curriculum for independent work. The direct allocation of hours for controlled independent work is approved for each discipline by scientific and methodological councils of specialties.

The main **forms of organization of student's independent work** in domestic and foreign higher educational institutions essentially have no differences and are determined by the following parameters:

– the content of the discipline; the level of education and the degree of preparedness of students;

– the need to streamline the students' workload in independent work.

When studying each discipline, the organization of the SIW should represent the unity of **three interrelated forms:**

1. Extracurricular independent work.

2. Classroom independent work, which is carried out under the direct supervision of the teacher.

3. Creative independent work, including research work.

Specific forms of extracurricular SIW can be very different, depending on the purpose, nature, discipline, volume of hours determined by the curriculum: preparation for lectures, seminars, practical and laboratory classes; abstracting articles, individual sections of monographs; study of textbooks; study and taking notes of anthologies and collections of documents; study within the course program topics and problems that are not brought to lectures and seminars; performance of control works; writing thematic reports, abstracts and essays on problematic topics; annotation of monographs or their individual chapters, articles; taking notes of monographs or their individual chapters, articles; participation of students in the preparation of tests; performing research and creative tasks; writing term papers and theses; compiling a bibliography and abstracting on a given topic; creating visual aids on the topics studied; independent study of the topic in the framework of "round tables"; classes in the archive, museum, bibliographic department of the library, etc.

Taking into account the above description of the variety of forms of extracurricular SIW, it is necessary at each stage to explain the goals of the work, to control the understanding of these goals by students, gradually forming their ability to independently set goals and define tasks.

Classroom independent work can be implemented during practical classes, seminars, laboratory practice and during lectures.

When conducting a lecture course directly in the classroom, it is advisable to control the assimilation of the material by the bulk of students by carrying out express surveys on specific topics, test control of knowledge, a survey of students in the form of a game "What? Where? When?" etc.

In practical and seminar classes, the use of various forms of SIW allows you to make the learning process more interesting and increase the activity of a significant part of students in the group.

In practical classes, it is recommended to devote at least 1 hour out of two (50 % of the time) to students' independent work. When organizing a practical lesson, it is advisable to use the following algorithm:

1) the teacher's introductory speech (the objectives of the lesson, the main issues that should be considered);

2) a frontal survey that allows you to identify the readiness of students for the lesson;

3) completing 1–2 tasks at the blackboard (collective discussion is possible);

4) independent performing of tasks;

5) discussion of the completed tasks (at the end of the current lesson or at the beginning of the next one).

To conduct classes, it is necessary to have a large bank of tasks and tasks for independent solution, and they can be differentiated by the degree of complexity.

According to the results of self-completion of tasks, an assessment should be made. It is also possible to evaluate a student's preliminary preparation for a practical lesson, for example, by rapid testing (closed-form test tasks) for 5, maximum – 10 minutes. Thus, with intensive work, it is possible to give at least two grades to each student in each lesson. In this case, the goal is not just to make grades, but to make the assessment procedure developing, allowing the student to see their own gaps and determine ways to overcome them.

Based on the materials of the section, it is advisable to give students homework and at the last practical lesson on the section to summarize the results of its study (for example, to conduct a test work on the whole section), discuss the grades of each student, give additional assignments and recommendations for their implementation to those students who want to have a higher grade.

The forms of the SIW should be different for students of different courses. Undergraduate students should be taught to work with textbooks, monographs, articles, sources, write notes, and later – to draw up abstracts, essays, term papers, and then theses.

An interesting form of SIW for practical classes at senior courses is "business training games (Game-Based Learning)". The theme of the game can be related to specific professional situations or be of an applied nature, include situational modeling tasks on topical issues, etc. The purpose of the business game is to simulate and make decisions.

During seminars and practical classes, students can perform SIW both individually and in small (creative) groups, each of which develops its own project (task). The completed project (solution of a problem-solving) is then reviewed by another group in a circular system. Public discussion and defense of one's own version increase the role of the ISW and strengthen the desire for its high-quality implementation. This system of organizing practical classes allows you to introduce scientific and research elements into educational and professional tasks, simplify or complicate tasks.

The activity of students' work in ordinary practical classes can be enhanced by the introduction of elements of the SIW, as a result of which the student receives his individual task (option), while the task condition is the same for all students, and the initial data are different. Before starting the task, the teacher gives only general methodological instructions (the general order of solution, available reference materials, etc.). This form of SIW contributes to a deeper assimilation of the studied material, a change in the attitude of students to taking notes of lectures, since without understanding the theory of the subject, without a good summary, it is difficult to count on success in completing the task. This improves the attendance of both practical and lecture classes.

Another form of SIW in practical classes may consist in self-study of schemes, programs, etc., which the teacher distributes to students along with control questions that the student must answer during the lesson.

Performing a laboratory workshop, as well as other types of educational activities, contains many opportunities for using active teaching methods and organizing SIW based on an individual approach.

When conducting a laboratory workshop, it is necessary to create conditions for the most independent performance of laboratory work. Therefore, when organizing a laboratory workshop, it is advisable to use the following algorithm:

1) conduct an express survey (orally or in a test form) on the theoretical material necessary to perform the work (with an assessment);

2) check the laboratory work plans prepared by the student at home (with an assessment);

3) evaluate the student's work in the laboratory and the data obtained by him (assessment);

4) check and rate (make an assessment) the report.

Any laboratory work should include a deep independent study of theoretical material, the study of methods of conducting and planning an experiment, the development of measuring instruments, processing and interpretation of experimental data. At the same time, some of the work may not be mandatory, but performed as part of independent work on the course. It is advisable to include sections with additional elements of scientific research in a number of works, which will require in-depth independent study of theoretical material.

The main thing in the strategic line of organizing students' independent work at university is not to optimize its individual types, but to create conditions for high activity, independence and responsibility of students in the classroom and outside it during all types of educational activities.

The simplest way – reducing the number of classroom classes in favor of independent work – does not solve the problem of improving or even maintaining the same level of quality of education, because a decrease in the volume of classroom work is not necessarily accompanied by a real increase in independent work, which can be implemented in a passive version.

In general, there are two main directions of building the educational process based on the independent work of students.

The first is to increase the role of independent work in the classroom. The implementation of this path requires teachers to develop methods and forms of classroom organization that can ensure a high level of student's independence and improve the quality of their training.

The second is to increase the student's activity in all areas of independent work during extracurricular time, which is associated with a number of difficulties. First of all, this is the unavailability of both the majority of students and teachers, both in professional and psychological aspects. In addition, the existing information and methodological support of the educational process is not enough for the effective organization of independent work.

5.2. The essence and role of students' research work (R&D) in the preparation of a future specialist. Forms and methods (techniques) of organizing students' research work at university

The University is based on two equal leading activities: educational and scientific. Research work (R&D) is an activity of a scientific nature, which is associated with scientific study, research, experiments. **Research work** in a broad sense is both a process (activity) aimed at expanding existing knowledge, obtaining new data, testing existing scientific hypotheses and establishing new patterns, phenomena in nature and society, and the result of this process.

For the development of university science, the preparation of students for participation in scientific activities is of fundamental importance.

Currently, the student's research work (SRW) is one of the most important components of the educational process in higher education in the preparation of a future specialist.

Traditionally, the concept of "student's research work" (SRW) is identified with the forms of attracting students to the scientific work of departments, as well as department and university laboratories, performing educational research, term papers and theses, participating in conferences, seminars, competitions, exhibitions, etc. This process includes not only the student's academic work at university and the preparation of abstracts and term papers, final qualifying papers, but also his extracurricular activities in scientific circles, conferences and problem laboratories.

According to L. V. Chuprova, the concept of "student's research work" includes the following elements:

– teaching students the basics of research work, instilling certain skills in them;

– performing scientific research under the guidance of teachers.

Properly organized and planned student's research work in the process of studying at university performs a number of functions:

– *educational*: mastering theoretical (scientific facts) and practical (scientific research methods; methods of conducting experiments; methods of applying scientific knowledge) knowledge;

– *organizational-orientational*: the formation of the ability to navigate in sources, literature; development of skills to organize and plan their activities; choice of information processing methods;

– *analytical and corrective*: it is connected with the student's reflection, his self-analysis, self-improvement of planning and organization of his activities; correction and self-correction of educational and cognitive activity;

– *motivational*: the development and strengthening of interest in science in the process of carrying out research activities, cognitive needs, beliefs in the theoretical and practical significance of the scientific knowledge being developed; the development of a desire to become more familiar with the problems of the studied field of scientific knowledge, a variety of points of view; stimulating self-education, self-development;

– *developing*: the development of critical, creative thinking, the ability to act in standard and non-standard situations, the ability to substantiate, defend one's point of view; understanding the development of motivation (interest, desire for knowledge), the development of abilities (cognitive, communicative, special abilities, etc.);

– *educating*: the formation of moral and legal self-awareness; the education of the ability to adapt in a changing social environment; the formation of adequate self-esteem, responsibility, purposefulness, strong-willed self-regulation, courage in overcoming difficulties and other abilities and character traits. The educational function also includes the education of professional vocation, professional ethics.

In the system of higher professional education, there are several directions for the application and implementation of types and forms of student's research activities:

1) enrichment of traditional academic forms of organization of the educational process (lectures, seminars, practical and laboratory classes) by performing research-type tasks;

2) development of extracurricular forms of involvement of students in research activities (e. g., writing research reports, articles, training reports; organization of Olympiads (Contest in different disciplines) and scientific conferences; development of projects to receive grants; optional forms of education; forms of scientific cooperation University – production (at enterprises, plants, etc.);

3) the introduction of less common specific to higher education collective forms of scientific and practical activities of students (academic research groups, groups of young researchers, etc.).

Within the framework of study time, with the enrichment of traditional forms of organization of the educational process, the

development of students' research skills and abilities is possible in the case of using the means of developing learning: problem-solving, research, project, heuristic, the main task of which is the formulation of cognitive contradictions in the process of studying a particular discipline.

In this regard, the **forms and methods of attracting students to scientific work** can be divided into:

– research work included in the educational process and held during study time in accordance with the curriculum plans and programmes (special lectures on the basics of scientific research, different types of training sessions with elements of scientific research, educational and research work of students);

– student's research work performed outside the classroom.

The student's research work carried out during study time can include term papers performed during the entire period of study at university, as well as final qualifying works (papers).

Writing essays on the topics of practical classes can also be attributed to the student's research work provided for by the current curriculum. An important form of students' research work performed during school hours is the introduction of elements of scientific research into laboratory work. When performing such work, the student independently draws up a work plan, selects the necessary literature, performs mathematical processing and analysis of the results, draws up a report.

The main **forms of student's research work performed during extracurricular time** are:

– subject groups;

– problem-solving groups;

– problem-solving student laboratories;

– participation in scientific and practical conferences.

Thus, the process of preparing future specialists for scientific work will be effective if students are involved in various forms of research activities. Therefore, throughout the entire period of students' education, it is necessary to systematically and purposefully train future specialists to carry out scientific activities, create creative groups taking into account the scientific interests, abilities, capabilities and experience of students' scientific work; provide a research base; equip them with the methodology of scientific work; to create situations of success in the implementation of scientific results into practice; to encourage creative activity and independence of researchers in solving scientific problems.

5.3. Course and diploma project as a type of students' independent educational research activity

Course project is one of the types of student's independent work and represents the solution of educational or professional tasks in the studied disciplines.

The purpose of course project is to prepare for diploma project. In the process of achieving this goal, a number of specific tasks are solved:

– generalization of the knowledge gained by students over the entire period of study;

– formation of skills to use reference literature and regulatory and technical documentation in a specific field of research;

– acquisition and development of practical skills to solve complex technical problems.

During the course project, the student takes the first steps towards independent scientific creativity. He learns to work with scientific literature, acquires skills of critical selection and analysis of necessary information. The requirements for the course project are minimal in the first year, and it is not difficult for the student to write it. Then the requirements increase markedly next year, and writing the work turns into a truly creative process. Thus, by increasing the requirements for course project every year, the university contributes to the development of the student as a researcher.

Diploma project is the final and most responsible stage of students' education at a higher educational institution.

The purpose of the diploma project is:

– systematization and consolidation of theoretical and practical knowledge acquired by the student during the study period, and the application of this knowledge in solving specific technical, economic or production tasks;

– in-depth study of special issues;

– development of skills of conducting independent work in solving issues and problems developed in the diploma project;

– ability to use normative, reference and other special literature;

– identification of the degree of students' readiness for independent work in the conditions of modern production.

Thus, the completion of the diploma project aims to further develop the creative and cognitive abilities of the student, and as the final stage of the student's education at university is aimed at consolidating and

expanding theoretical knowledge, and in-depth study of the chosen topic. At senior courses, many students are already working in their specialty, and when choosing a topic for a diploma, this fact is most often taken into account. In this case, in addition to literature analysis, the diploma can include your own practical experience on this issue, which only increases the scientific value of the work.

Diploma project and especially its defense in the State Attestation Commission serve as the basis for determining the level of training of qualified specialists and assigning them the appropriate qualifications.

To supervise the diploma project on the recommendation of the graduating department, a supervisor is appointed, as a rule, from among professors and associate professors, as well as the most experienced teachers and researchers of the university. If necessary, the department is granted the right to invite consultants on certain sections of the diploma paper from among the staff of other departments. The supervisors of the diploma paper can also be leading specialists of the relevant profile from other organizations and enterprises.

The implementation of a diploma project can be carried out by a student both at a university and in other scientific and design institutions, enterprises and organizations, providing him with the necessary conditions for work.

The diploma project should be carried out on the basis of an in-depth study of the literature on the issues considered in the project (textbooks, monographs, periodicals, journals in foreign languages, normative literature, etc.), and the experience of advanced enterprises studied by the student during the pre-graduate practice.

5.4. The system of practical training of future specialists at university. Various types of internship in the system of students' professional training at university

Students' internship, being an integral part of the main educational program of higher education, is directly focused on the professional and practical training of students. The internship allows the student to try his hand at the chosen profession, to learn how to apply the knowledge gained in the classroom, in professional activities.

According to the new educational standards, the role of internship in the training of specialists and masters is increasing as another stage in the formation and achievement of students' professionalism. It is in the course of practical activity that a future specialist acquires a set of skills and abilities necessary for the formation of professional and special competencies, and his professional mobility develops.

The goals and objectives of the internships (types of internships) are determined by the state educational standards of higher education, the types and terms of the internships are determined by the curriculum plans and schedules of the educational process, the content is determined by the programs of the internships. The organization of all types of internships at various stages of training is aimed at ensuring continuity and consistency of students' mastery of professional activity in accordance with the requirements for the graduate's level of training.

Educational internship is part of the study of specific disciplines and is conducted by teachers of the relevant departments.

Pre-graduate internship is the final stage of training and is carried out after the student has mastered the theoretical and practical training programs. **Industrial internship** is a stage of practical training of students in the profile of the specialty they receive (direction of training, master's degree program).

The main *objectives of all types of internships are:* familiarization with the activities of various services, institutions and organizations; arming students with knowledge about the purpose, essence and specifics of professional activity; psychological adaptation to the chosen profession; creating an attitude to personal, socio-moral and professional development; formation of the foundations of scientific and cognitive activity of a student in a higher educational institution; formation of creative and research approaches to professional activity; mastering the technologies of activity; improvement of theoretical knowledge and their integration into practical activities; formation of professional skills, individual style of activity.

The internship is aimed at mastering students' knowledge about the social significance of the profession, the requirements for the personality of a graduate with higher education, the content of professional activity, forms and methods of scientific knowledge, scientific organization of work, the basics of self-educational and self-educational activities.

The development of skills in the course of internship involves the acquisition by students of work planning skills, the dissemination and introduction of innovations and best practices, the development of applied technologies, projects, programs and their implementation into practice, the organization of students' internship on the basis of specialized institutions with the implementation of research and applied tasks, the development of student activity and the creation of conditions ensuring the effectiveness of the educational process, the development of self-government and the creation of conditions for self-implementation and self-affirmation of students.

5.5. Practical class

Questions for discussion

1. The concept of students' independent work, its types, levels, forms. Didactic requirements for the organization of students' manageable independent work.
2. Educational and methodical support of student' independent work. The use of electronic learning tools in the organization of students' independent work.
3. The essence and role of students' research work (R&D) in the preparation of a future specialist. Forms and methods of organizing students' research work at university.
4. Course and diploma project as a type of students' independent educational research activity.
5. The system of practical training of future specialists at university. Various types of internships in the system of students' professional training at university.

Practical tasks

1. Develop a list of questions and tasks for students to work independently in one of the sections of the discipline (according to the profile of their specialty).
2. Analyze the conditions for improving the effectiveness of practical training of future specialists (according to the profile of your specialty).

3. Reflect on your own experience of being supervised for a research degree. How would you rate the experience? What aspects of that supervision would you wish to import into you own practice and what aspects would you reject?

4. Prepare an essay on the topic "The relationship of science and practice in the professional training of university students".

Situational tasks

A student from the first to the third year worked under the guidance of one teacher (completing term papers, participating in conferences, etc.), but in the fourth year, due to a conflict, expresses a desire to do a thesis under the supervision of another teacher. The student is successfully studying and intends to enter the Master's program. The situation of negotiations with another supervisor is known to the previous one. Is it possible to avoid a conflict between teachers, a teacher and a student, and, finally, to keep the student's desire to be engaged in further scientific work? How should the student's interaction with the supervisor be built?

TOPIC 6. TECHNOLOGIZATION AND INFORMATIZATION OF THE EDUCATIONAL PROCESS AT UNIVERSITY

6.1. The concept of pedagogical technology. Criteria for the effectiveness (methodological requirements) of technologies.

6.2. Classification of technologies. Technologies of block-modular, problem-solving, active learning, heuristic, sign-contextual, developmental learning, information, distance learning.

6.3. Practical class.

6.1. The concept of pedagogical technology. Criteria for the effectiveness (methodological requirements) of technologies

Any activity, according to V. P. Bespalko, can be either technology or art. Art is based on intuition, technology is based on science. Everything begins with art and ends with technology, so that everything repeats from the beginning. For example, any planning that takes place in pedagogical activity contradicts spontaneity, improvisation, intuitive actions, i. e. it is the beginning of technology.

The term "technology" was borrowed by pedagogy from the industrial sphere in the early 60s of the XX century. **Technology** is a set of techniques and methods for obtaining, handling, processing something. The use of this term in pedagogical activity assumes that the teacher must also perform a number of certain mandatory actions in order to achieve the tasks set by him in the development, upbringing and training of the individual. Pedagogical technology is a thoroughly thought-out model of joint pedagogical activity in the design, organization and conduct of the educational process with the unconditional provision of comfortable conditions for students and teachers (V. M. Monakhov).

According to M. V. Klarin, pedagogical technologies are a system set and the order of functioning of all personal, instrumental and methodological means used to achieve pedagogical goals.

The concept of "pedagogical technology" in its modern interpretation functions as a science that investigates the most rational ways of organizing learning (training), as a system of methods, principles and regulators used in teaching, and as a real learning process.

Pedagogical technology should meet the basic methodological principles. These include:

Conceptuality. Each pedagogical technology should be based on a certain scientific concept, including philosophical, psychological, didactic and socio-pedagogical substantiation for achieving educational goals.

Consistency (Systematicity). Pedagogical technology should have all the features of the system: the logic of the process, the interconnection of all its parts, integrity.

Manageability, implies the possibility of diagnostic goal-setting, planning, designing the learning process, step-by-step diagnostics, varying by tools and methods in order to correct the results.

Efficiency. Modern pedagogical technologies exist in competitive conditions and should be efficient in terms of results and optimal in terms of costs, to guarantee the achievement of a certain standard of training.

Reproducibility implies the possibility of using (repeating, reproducing) pedagogical technology in other similar educational institutions, by other subjects.

The pedagogical process includes the process of learning (teaching) and upbringing. This is due to the existence of teaching technologies and educational technologies. This determines the existence of learning technologies and upbringing technologies.

Learning (teaching) technology is a purposeful and strictly regulated activity of the teacher and the activity of students adequate to it, which is based on the achievement of the planned result (i. e., the acquisition of knowledge, skills, abilities, education by the student in the learning process).

The learning technology performs a number of *functions*:

– prognostic (applies to all subjects of the educational process and provides for their foresight of their own results. It is also aimed at modeling the pedagogical interaction of a teacher and students, making a forecast of the level of students' development during the implementation of the technology);

– organizational and activity (organization of the teacher's activity within the framework of the implemented technology, optimization of his pedagogical work; organization of effective conditions for the student's activity; mutual organization of joint activities of the teacher and students; organization of students' independent work);

– reflexive (assessment of the objectivity of the result of pedagogical interaction, understanding and mastering the experience of interaction, fixing the state and causes of development);

– communicative (implementation of communicative activities, exchange of information between the teacher and students, creation of necessary conditions for the formation of mutual understanding between the teacher and students);

– developing (comprehensive development of the student, preparing him for life in society).

Thus, the following *characteristic features of the learning (teaching technology)* can be distinguished:

– clarity of goal-setting (goals must be formulated in such a way that they are necessarily achieved) ;

– strong motivation of learning (the teacher's knowledge of various methods of motivation and stimulation of students' activities);

– diagnostic learning (training) (step-by-step use of diagnostic tasks to determine the students' readiness to proceed to the next task);

– reflection of learning outcomes (analysis, evaluation of one's own successes and failures in order to form a real idea of one's abilities and capabilities);

– monitoring of activities (mandatory compliance with the stages of technology; its strict regulation);

– the efficiency of technology (the main indicator of the efficiency of technology is the level of student's development, his desire to engage in self-education);

– subject-subject (subjectivity) interaction (the teacher and students consider each other as equal communication partners).

The main components of the learning (teaching) technology are:

– target (goal as a pre-planned result);

– motivational (leading to subjectivity);

– organizational-activity (a clear definition of the algorithm of activity);

– reflexive (the real student's opinion about their abilities and capabilities, achievements);

– control and diagnostic (the answer to the questions: has the goal been achieved?, What is the result?, the tool in this component is a specially developed system of test tasks).

6.2. Classification of technologies. Technologies of block-modular, problem-solving, active learning, heuristic, sign-contextual, developmental learning, informational, distance learning

Today there is a huge variety of technologies. Their description and systematization can be carried out on various grounds, as well as according to criteria that have complex characteristics.

In a generalized form, modern learning (teaching) technologies can be represented as follows (tab. 6.1):

Table 6.1

Learning (teacing) technologies

Name of the technology	Purpose of the technology	Essence of the technology	Mechanism of the technology
1	2	3	4
Technology of problem-based learning	Development of students' cognitive activity, creative independence	Consistent and purposeful presentation of cognitive tasks to students, by solving which students actively assimilate knowledge	Search methods; cognitive task setting
Technology of concentrated learning	Creating the structure of the educational process as close as possible to the natural psychological features of human perception	In-depth study of subjects by combining classes into blocks	Learning (teaching methods) that take into account the dynamics of students' working capacity
Modular learning technology	Providing flexibility in learning (training), adapting it to the individual needs of personal basic training	Students' independent work on an individual curriculum	Problem-based approach, individual learning pace

Table 6.1 (end)

1	2	3	4
Technology of developing (developmental) learning	Development of personality and its abilities	Orientation of the educational process on the potential of a person and their implementation	Involvement of students in various activities
Technology of differentiated learning	Creation of optimal conditions for identifying inclinations, developing interests and abilities	Mastering the program material at various planned levels, but not below the mandatory (state standard)	Methods of individual learning (training)
Technology of active (contextual) learning	Organization of students' activity	Modeling of the subject and social content of future professional activity	Methods of active learning
Technology of business learning games	Ensuring the personal and activity character of the assimilation of knowledge, skills and abilities	Independent cognitive activity aimed at the search, processing, assimilation of educational information	Game-based methods of involving students in creative activity

The above types of learning technologies reveal their diversity. The systematization of technologies was carried out on the basis of different criteria in order to describe them comprehensively. The use of one of them does not exclude the possibility of using other systems.

In the world of pedagogy, many improved and completely new learning technologies have been developed.

In the technology of **block-modular learning (training)**, attention is focused on certain logical components. Modular training involves rigid structuring of educational information, the content of training and the organization of students' work with full, logically completed training blocks (modules). In modular training, everything is pre-programmed:

not only the sequence of studying the educational material, but also the level of its assimilation and quality control of assimilation.

The module itself is a logically completed part of the educational material, necessarily accompanied by the control of students' knowledge and skills.

The basis for the formation of modules is the curriculum program of the discipline. The number of modules depends both on the specifics of the subject itself and on the desired frequency of learning control. The module coincides with the topic of the academic subject. However, unlike the topic in the module, everything is measured and evaluated: assignment, work, attendance, starting, intermediate and final level of students. The module clearly defines the learning objectives, tasks and levels of study of this module, skills and abilities are named. Modular learning is very close in its ideas and organizational forms to programmed learning. Training modules and tests can be easily transferred to a computer learning environment.

The training course usually includes at least three modules. At the same time, a theoretical block, practical work, and final projects can be a separate module.

When developing a module, it is taken into account that each module should give a completely specific independent portion of knowledge, form the necessary skills. After studying each module, students receive recommendations from the teacher on their future work. By the number of points scored by students from the possible ones, the student himself can judge the degree of his knowledge.

Modular learning (training) is inextricably (closely) linked with the rating control system. The larger or more important the module is, the more points it is allocated. The control of modules is usually carried out 3–4 times a semester, it includes a test or an exam on the course.

The module contains cognitive and educational-professional parts. The first forms theoretical knowledge, the second – professional skills and abilities based on acquired knowledge. The ratio of the theoretical and practical parts of the module should be optimal, which requires professionalism and high pedagogical skills of the teacher.

The modular interpretation of the training course should be based on the principle of consistency, assuming:

1) consistency of content, i. e. the necessary and sufficient knowledge (thesaurus), without which neither the discipline as a whole nor any of its modules can exist;

2) alternation (rotation) of cognitive and educational-professional parts of the module, providing an algorithm for the formation of cognitive-professional skills and abilities;

3) systematic control, logically completing each module, leading to the formation of the students' abilities to transform the acquired systematization skills into professional skills to analyze, systematize and forecast engineering solutions.

In the modular interpretation of the discipline, it is necessary to establish the number and content of modules, the ratio of theoretical and practical parts in each of them, their order, the content and forms of modular control, the schedule of the project task (if it is provided by the curriculum plan), the content and forms of final control.

Along with the block-modular system, **problem-based learning (training)** is also used. The essence of the problematic interpretation of the educational material is that the teacher does not communicate knowledge in a ready-made form, but sets problematic tasks for students, encouraging them to look for ways and means to solve them. The problem itself paves the way for new knowledge and methods of action.

Solving the problem requires the inclusion of creative thinking. Reproductive mental processes associated with the reproduction of learned patterns are simply ineffective in a problematic situation.

A teacher engaged in problem-based learning (training) should know the structure and typology of problem situations, ways to resolve them, pedagogical techniques that determine the tactics of the problem approach. The examples of problematic situations based on contradictions typical for the cognitive process are the following:

– a problematic situation as a consequence of contradictions between school knowledge and facts new to students that destroy the theory;

– understanding of the scientific importance of the problem and the lack of a theoretical basis for its solution;

– the diversity of the concept and the lack of a reliable theory to explain these facts;

– practically accessible result and lack of theoretical substantiation;

– the contradiction between a theoretically possible solution and its practical inexpediency;

– the contradiction between a large amount of factual data and the lack of a method for their processing and analysis.

A problematic situation has pedagogical value only when it allows you to distinguish between the known and the unknown and outline solutions when a person, faced with a problem, knows exactly what he does not know.

Therefore, in the classification of problematic tasks, tasks with uncertainty of conditions or the desired, with redundant, contradictory, partially incorrect data are distinguished. *The main thing in problem-based learning is the process of finding and choosing the right, optimal solutions, that is, path-traversing work, and not instant access to a solution.*

As a result of research and practical activity, three main *conditions for the success of problem-based learning (training)* have been identified:

1) providing sufficient motivation to arouse interest in the content of the problem;

2) ensuring the feasibility of working with problems arising at each stage (rational ratio of the known and unknown);

3) the importance of the information obtained in solving the problem for the student.

Not every educational material is suitable for problem presentation. It is easy to create problematic situations when introducing students to the history of the subject of science. Hypotheses, solutions, new data in science, the crisis of traditional ideas at a turning point, the search for new approaches to the problem – this is not a complete list of topics suitable for problematic presentation. Mastering the logic of search through the history of discoveries is one of the promising ways of forming problem thinking. The success of the restructuring of learning from traditional to problematic depends on the "level of problematicity", which is determined by the following two factors:

1) the degree of complexity of the problem deduced from the relations of the known and unknown by the student within the framework of this problem;

2) the share of creative participation of students in solving the problem, both collective and personal.

So that the level of motivation of students in the process of problem learning does not decrease, the level of problematicity should accordingly increase from course to course.

There are three main forms of problem-based learning in pedagogy:

1. Problematic presentation of educational material in the monological mode of a lecture or the dialogical mode of a seminar.

2. Partially-search activity during the experiment, in laboratory work.

3. Independent research activity.

A problem seminar can be held in the form of a theoretical game, when small working groups organized on the basis of a student group prove to each other the advantages of their concept, their method. The solution of a series of problematic tasks can be submitted to a practical class devoted to the verification or evaluation of a certain theoretical model or methodology, the degree of their suitability in these conditions. The greatest effectiveness of the problem approach is implemented through the students' scientific work, during which the student goes through all the stages of the formation of professional thinking, while at a separate lecture, seminar or practical class, one goal or a limited group of goals of problem-based learning is pursued. But in any case, its *main goal is the development of creative skills and abilities, the formation of creative professionally oriented thinking.*

In traditional pedagogy, educational activity has always been focused on the student as an object of the pedagogical process. The ratio "teacher-subject-student-object" limited the possibilities of interpersonal interaction, effective communication, had a personality-alienated character, demonstrated the isolation of the pedagogical process from the actual application of the acquired knowledge in practice in professional activity. Students were "trained" to a certain level of information that had time to become outdated before a person began to carry out their professional activities, and the ability to quickly respond to changes in many university graduates was insufficiently developed, as evidenced by the analysis of their practical experience.

Active learning technologies are one of the most powerful areas of modern pedagogical research.

The problem of finding methods to activate the students' educational and cognitive activity has been acutely posed at different times by different authors.

There are a number of distinctive features of active learning:

1. Forced activation of thinking, when the student is forced to be active regardless of his desire.

2. A sufficiently long time of students' involvement in the educational process, since their activity should not be short-term or episodic, but largely stable and long-lasting (that is, during the entire class).

3. Independent creative decision-making, increasing the degree of students' motivation and emotionality.

4. Constant interaction of students and teachers through direct and feedback.

Active learning (teaching) methods are of considerable interest in professional education, the essence of which is the creation of didactic and psychological conditions favorable for the manifestation of students' intellectual, personal and social activity.

Active learning technologies significantly change both the role of a teacher (instead of the role of an informant, the role of a consultant) and the role of a student (information serves not as a goal, but as a means for mastering the actions and operations of professional activity). Any technology is designed to activate and intensify the students' activities, but in the technology of active learning, this idea is dominant.

Let's present a brief description of the main active learning (teaching) methods that are of particular value for technical and socio-economic specialties at university level.

Based on the reconstruction (imitation) of the context of activity, its model representation in training, all methods of active learning are divided into imitation (simulation) and non-imitation (non-simulation).

Non-imitation (non-simulation) methods do not imply the construction of a model of the studied phenomenon, process or activity. Activation is achieved here through the selection of the problematic content of learning (training), the use of a specially organized procedure for conducting a class, as well as technical means and ensuring dialogical interactions between the teacher and students.

Non-imitation (non-simulation) forms and methods include a problem lecture, a seminar-discussion with or without a "brainstorming", a field practical class, programmed learning (training), course project, diploma project, and an internship without fulfilling an official role. Obviously, the listed learning technologies create opportunities not only to transmit certain information to students, but also to create prerequisites for the development of some both general and professional skills and abilities.

The basis of *imitation* (*simulation*) *technologies* (*Imitation Learning*) is imitation or imitation-game modeling, i. e. reproduction in learning conditions with one or another measure of the adequacy of the processes occurring in a real system.

The construction of models and the organization of students' work with them make it possible to reflect various types of professional context in the educational process and to form professional experience in the conditions of quasi-professional activity. An example of imitation methods is role-playing, a didactic game.

Role-playing is an imitation (simulation) game-based method of active learning, characterized by the following features:

– the presence of a task (problem) and the distribution of roles between the participants in its solution. Example: using this method, a production meeting can be simulated;

– interaction of participants of the first class. Each of the participants, in accordance with their role, can agree or disagree with the opinions of other participants, express their own, etc.;

– the teacher's introduction of corrective conditions into the class process. So, the teacher can interrupt the discussion and provide some new information that needs to be taken into account when solving the task, direct the discussion in a different direction, etc.;

– evaluation of the results of the discussion and summing up the results of the game by the teacher and participants.

Role-playing is a fairly effective method of solving organizational, managerial and economic tasks of the cycle of socio-economic disciplines and requires significantly less costs and funds than business games.

The business game is a form of recreating the subject and social content of the future professional activity of a specialist, modeling such systems of relations that are characteristic of this activity as a whole.

In a business game, a student performs a quasi-professional activity that combines educational and professional elements. Knowledge and skills are acquired by them not abstractly, but in the context of the profession, being imposed on the canvas of professional work. In contextual learning, knowledge is not acquired for the future, but provides the student's game actions in the real process of a business game. At the same time, the student, along with professional knowledge, acquires special competence – skills of special interaction and management of people, collegiality, the ability to lead and obey, therefore, the business game educates personal qualities, accelerates the process of socialization. During the game students master:

1) standards of professional actions;

2) standards of social actions, that is, relations in the team of production workers.

At the same time, each of its participants is in an active position interacting with partners, correlating their interests with those of partners, and thus getting to know themselves. A number of principles are applied to business games:

Problem-based principle underlies the content of the game and is included in the system of problematic training tasks presented in the form of descriptions of specific production situations or tasks. They may contain implicit alternatives, contradictions, redundant or incorrect data, requirements to transform the situation according to more complex or simpler criteria, to find missing information, etc.

The principle of role-based interaction in joint activities sets the requirement for the developer or the leader to select and specify roles, define powers, resources, and interests of "officials". All this should be reproduced by an appropriate set of methodological and psychological conditions for joint or individual decision-making. A business game is the work of two or more people. The game process is possible only if there are several participants who enter into communication and interaction.

The principle of dialogic communication is a necessary condition of the game. Each participant, in accordance with the role, expresses his point of view, his attitude to all the problems of the business game. The process of thinking is born in the dialogue. Its occurrence is due to the presence of a contradiction or problem included in the game. The task of the developer and the moderator is to create optimal didactic conditions for the emergence of a dialogue that develops into a polylogue, discussion.

Business games have their advantages and disadvantages, certain areas of application. The business game as a form of contextual learning should be chosen, first of all, to solve the following pedagogical tasks:

– formation of students' holistic view of professional activity and its dynamics;

– acquisition of problem-professional and social experience, including the adoption of individual and collective decisions;

– development of theoretical and practical thinking in the professional sphere;

ormation of cognitive motivation, provision of conditions for the emergence of professional motivation.

Thus, not any content of professional activity is suitable for game modeling, but only that which contains a problem and cannot be assimilated individually.

The main rules of the game can be compliance with the regulations, the use of information carriers, the use of active forms of information representations, issues of a debatable nature.

Some *tips and recommendations for developers and users of business games*:

1. Business games should be used only where they are really needed. This is the acquisition of a holistic experience of future professional activity, deployed in time and space.

2. The development of the game should be approached systematically and take into account its impact on other types of work with students, as well as the reaction of other teachers, which may be inadequate.

3. The business game requires the subject and social competence of the participants, so you should start preparing for the business game by analyzing specific production situations and roles playing. It is also necessary to form a culture of discussion among students before the game.

4. The structural components of a business game should be combined in such a way that it does not become either a simulator or a gambling game.

5. The game should be based on the principles of self-regulation. The teacher acts before the game, before the start of the exercise, at the end and during the analysis of the game, which requires a lot of preparatory work, theoretical and practical skills in designing a business game.

6. The mode of students' work during the business game does not fit into the framework of their traditional behavior in the classroom and should be subordinated to the logic of the simulated production process.

7. Compact business games designed for 4 hours of practical classes are most acceptable at university. It is better to spend them in the last classes of the last day of the school week, taking into account the emotional charge.

Heuristic learning (training) technologies have also become firmly established in pedagogical practice. Heuristics (Greek. "I discover, I find, I discover") is a science that studies the patterns of constructing new actions in a new situation, that is, the organization of productive thinking processes, on the basis of which the process of generating ideas (hypotheses) is intensified and their consistent increase in plausibility (probability, reliability) is carried out.

The modern stage of development of heuristics as a science is associated with the emergence of cybernetics (1950's) and is characterized by intensive study of human heuristic activity. In addition,

due to the quantitatively accumulated information, the attention of researchers is focused on the conceptual definition of heuristics.

Educational heuristic activity is an activity during which the following abilities are purposefully developed:

– to understand the ways and methods of productive educational and cognitive activity, creatively copy them and learn at the same time from your own and borrowed experience;

– to systematize, that is, organize, educational information into interdisciplinary complexes and operate on it in a heuristic search when performing specific actions;

– to adapt to changing types of educational activities and anticipate its results;

– to plan and predict intellectual activity based on heuristic and logical operations and strategies;

– to form and make decisions on the organization of complex types of educational activities based on plausible reasoning, heuristic operations and strategies, followed by their logical verification.

One of the sources of heuristic activity is the information (experience) accumulated in the memory of the person who makes decisions (decider).

During a heuristic search, he extracts the information he needs, which will contribute to solving the problem. This most complex mental act of extracting relevant information is called actualization (implementation), the adaptation of the extracted information to the task being solved is its organization.

For more complex educational tasks that approach the tasks of a research nature and have non-standard elements in their structure, systematic methods of searching, solving problems and activating mental activity in this process have been developed. These methods also serve to solve problems of various kinds: economic, technical, organizational and managerial, etc.

A kind of heuristic methods is the "*Brainstorming*" *technique*. The idea of the method is based on the fact that criticism and fear slow down thinking, constrain creative processes. Taking this into account, it was proposed to divide the hypotheses and their critical evaluation in time. These two processes should be carried out by different people.

The solution of the problem during the application of this method is controlled by the manager. It ensures the fulfillment of all the rules of "Brainstorming", namely:

1. The condition of the task is formulated before the "storm" in general terms.

2. A group of "idea generators" puts forward the maximum number of hypotheses in the allotted time (20–40 minutes). Any hypotheses are put forward: fantastic, obviously erroneous, humorous. Ideas should follow continuously, complementing and developing each other. The time limit for each idea is given within 2 minutes, no evidence is required. All ideas are recorded. At this stage, any criticism is prohibited, including hidden, in the form of skeptical smiles, gestures, facial expressions. To increase the productivity of brainstorming, it is useful to first introduce its participants into a state of muscular and mental relaxation, relieve their mental tension and muscle clamps of the body.

3. A group of experts makes a judgment on the value of the hypotheses put forward. The examination and selection of hypotheses should be carried out carefully, frivolous and unrealistic hypotheses are evaluated.

4. The task not solved in the process of "storming" can be offered to the same team, but in a slightly modified form, formulation.

5. To activate the process of generating ideas during the "storm", it is recommended to use some techniques: inversion (do the opposite), analogy (do as it is done in another solution), empathy (consider yourself part of the task, find out your feelings, sensations), fantasy (do something fantastic).

6. Hypotheses are evaluated according to a 10-point system, and the average score is derived according to the estimates of all experts.

In line with the activity theory of assimilation of social experience, the **technology of sign-contextual learning (training)** – the technology of professional education has been developed.

Such learning (training), in which, with the help of the entire system of didactic forms, methods and tools, the subject and social content of the specialist's future professional activity is modeled, and the assimilation of abstract knowledge as sign systems is superimposed on the canvas of this activity, is called sign-contextual (contextual) training.

According to A. A. Verbitsky, one of the main goals of professional education is the formation of an integral structure of the student's future professional activity during his training. This means that in order to achieve the goals of forming the personality of a specialist in a professional educational institution, it is necessary to organize such learning (training) that ensures the transition, transformation of one type

of activity (cognitive) into another (professional) with a corresponding change of needs and motives, goals, actions, means, subjects and results.

The main characteristic of contextual learning, implemented using a system of new and traditional forms and methods of learning (teaching), is the modeling of the subject and social content of future professional activity.

In contextual learning, there are three *basic* forms of students' activity and a certain set of *transitional* ones.

The *basic* ones include:

1) academic type of educational activity (actual educational activity), in which the leading role belongs to the academic lecture;

2) quasi-professional activities (business games and other game forms);

3) educational and professional activities (students' research activity, industrial practice, "real" diploma projects).

All other forms act as *transitional* from one basic model to another: laboratory and practical classes, imitation (simulation) modeling, analysis of specific production situations, role-playing, special courses, special seminars, etc.

It is important to note that at the same time it is necessary to design not only the subject content that ensures the professional competence of a specialist, but also the social content that ensures the ability to work in a team, to be an organizer of production.

Today, within the framework of the concept of developing learning, a number of **technologies of developing (developmental) learning** have been developed, differing in target orientations, features of content and methodology.

Developing (developmental) learning (training) is understood as a new active-activity method (type) of learning, which replaces the explanatory and illustrative method (type).

In modern pedagogy, all groups of personality traits are interconnected and represent a complex dynamically developing integral structure. Individual differences determine the level of development of a particular group of qualities:

KAS	knowledge, abilities, skills
MAM	mental actions methods/techniques
SGMP	self-governing mechanisms of personality
EMS	emotional and moral sphere
APE	activity-practical environment

The technology of developing (developmental) learning (DL) is aimed at the holistic harmonious development of the individual, where the whole set of her/his qualities is manifested:

$$DL = KAS + MAM + SGMP + EMS + APE.$$

Developing (developmental) training is focused on the "zone of immediate development", that is, on the activities that the student can perform with the help of a teacher.

The Elkonin-Davydov technology is built on "meaningful enrichments", which may include the most general concepts of science expressing deep cause-and-effect relationships and patterns, fundamental genetically initial representations (number, word, energy, material), concepts in which internal connections are highlighted, theoretical images obtained by abstraction. The emphasis of the goals of the authors of this technology are the following:

– to form a theoretical consciousness and thinking;

– to form not so much KAS as ways of mental activity – MAM;

– to reproduce the logic of scientific thinking in educational activities.

Information technologies of learning (training) (IT) are becoming increasingly widespread, which are defined as a set of electronic tools and ways of their functioning used for the implementation of training activities.

As classification features of software and hardware used in education, we can distinguish:

– didactic orientation;

– software implementation;

– technical implementation;

– subject area of application.

In the literature there are several approaches to the classification of components of software and hardware complexes by didactic orientation.

The articulated part of knowledge is knowledge that is easily structured and can be transferred to the student using pieces of information (text, graphic, video, etc.).

The non-articulated part of knowledge is a component of knowledge based on experience, intuition, etc. This part of knowledge encompasses skills, habits, intuitive images and other parts of human experience that cannot be transmitted to the student directly, but are "obtained" by him in the course of independent cognitive activity in solving practical problems.

Based on this, it is possible to classify educational software and hardware complexes. *The technologies underlying these complexes and used to support the learning process of the articulated part of knowledge are declarative*. These include:

– computer textbooks;

– training databases;

– test and control programs and other computer tools that allow students to store, transmit and verify the correctness of the assimilation of information for educational purposes.

The technologies used in the creation of software and hardware complexes that support the process of mastering the non-articulated part of knowledge are procedural. Computer information technologies (CIT) of this class do not contain and do not test knowledge in the form of portions of information. They are built on the basis of various models. In this case, the CIT of this class include:

– application software packages (ASP);

– computer simulators (CS);

– laboratory workshops;

– business games programs;

– expert training systems (ETS) and other computer tools that allow the student to obtain (extract) knowledge on the subject area under study during the educational research.

Another approach to classification by didactic orientation is also possible. In this case, modern computer learning technologies are also divided into two classes:

– programmed learning systems (PLS);

– intelligent learning systems (ILS).

The technology of programmed learning assumes that students receive portions of information (text, graphic, video – everything depends on technical capabilities) in a certain sequence and provides control over the assimilation at the points of the training course determined by the teacher.

Accompanying lecture material with the help of modern educational information technologies should support the following functionality:

– creation and connection of dynamic images;

– creating your own and connecting high-quality static graphics (read using a scanner or created in other graphic editors);

– text decoration in various styles;

– sound accompaniment of the material.

Recently, **distance education technologies** have also become widespread. Distance education (DE) is understood as a complex of educational services provided to a wide range of the population in the country and abroad with the help of a specialized information and educational environment based on the means of exchanging educational information at a distance (satellite television, radio, computer communication, etc.).

Distance education is one of the forms of the system of life-long (continuing) education, which is designed to implement human rights to education and information. Distance education will provide equal opportunities for the education of schoolchildren, students, civilian and military specialists, unemployed in any part of the country and abroad through more active use of the scientific and educational potential of leading universities, academies, institutes, various industry training and retraining centers, as well as advanced training centers and other educational institutions. Distance education will allow you to get basic or additional education in parallel with the person's main activity. From the point of view of the organization and support of the educational process, within the framework of distance education, several groups of *problems* can be identified.

Firstly, these are the problems of creating distance education technologies (DET) at various levels:

– global (international and national) DET and their provision;

– regional DET and their provision;

– local DET and their provision.

Secondly, these are the problems of the organization of DE as such:

– conceptual models and didactic aspects of DE;

– the system of teachers-consultants and ways of their interaction with students;

– testing in the DE system;

– technologies and information educational environments;

– ways of transmitting educational information and communication.

The central link of DET is the tools of telecommunications, which allow to provide the educational process with:

– the necessary educational and teaching materials;

– feedback between a teacher and a student;

– exchange of management information within the DE system;

– access to international information networks, as well as to connect foreign users to the distance education system.

In the UK, more than 50 % of Master's degree programs in management are conducted using DE methods. The leading European organization in this field is the Open Business School of the British Open University.

During the DE, information technologies should ensure the delivery of the main volume of the studied material to the students, interactive interaction of students and teachers in the learning (training) process, providing students with the opportunity to work independently on mastering the studied material, as well as evaluating the knowledge and skills they have acquired in the learning (training) process.

In the world practice, the following information technologies are used to achieve these goals:

– provision of textbooks and other printed material;

– sending the studied materials on computer telecommunications;

– discussions and seminars conducted through computer telecommunications;

– video materials;

– broadcasting of educational programs on national and regional television and radio stations;

– cable TV;

– voice mail;

– two-way video conferences;

– one-way video broadcast with phone feedback.

At the same time, computer electronic textbooks or electronic textbooks on laser disks are also used.

The educational process with DET has the following main properties:

Flexibility – students mostly do not attend regular classes in the form of lectures and seminars, but work at a convenient time in a convenient place and at a convenient pace, which is a great advantage for those who cannot or do not want to change their usual way of life.

Modularity – DE programs are based on the modular principle. Each individual course of programs creates a holistic view of a specific subject area. This allows you to form a curriculum from a set of independent course modules that meets individual or group needs.

Economic efficiency – the average assessment of the world's educational systems shows that DE is 50 % cheaper than traditional forms of education. The relatively low cost of training is provided through the use of a more concentrated presentation and unification of

content, the orientation of DE technologies to a large number of students, as well as through more efficient use of existing training areas.

The role of the teacher is changing in the DE system. He is entrusted with such functions as coordinating the cognitive process, correcting the course taught, advising on the preparation of the curriculum, guiding the educational process, etc. Asynchronous interaction of the teacher and students in DET, as a rule, involves the exchange of messages by sending them to the correspondents' addresses. This allows you to analyze incoming information and respond to it at a convenient time for correspondents. Methods of asynchronous interaction are electronic voice mail or electronic computer networks.

As the main *advantages* of distance learning based on computer networks (compared with conventional correspondence education), foreign practitioners indicate:

– providing convenient tools for learning or communication;

– vast opportunities for group work;

– more successful communication with the teacher (methodologist);

– reduction of the time for the teacher (methodologist) to respond;

– free access of students to databases, library catalogs and other information resources;

– convenience in the management of students' personal cases;

– the ability to quickly receive and send homework;

– the ability to pass testing in direct access mode.

Among the *disadvantages* are the following:

– the need to frequently connect to the network to keep abreast of the discussion;

– excessive amount of information;

– unsatisfactory interaction between students;

– excessive fragmentation of discussion topics (fragmentation);

– problems related to time (lack of time, asynchrony, etc.).

The idea of *informatization* of education is the need to train specialists in an information society that differs significantly from other forms of organization of public life, without affecting its foundations. The growth of knowledge requires serious changes in the implementation of the educational process: the very content of education, its organization and ways of communication of participants in the pedagogical process with knowledge and with each other. One of the essential directions in solving such problems is the organization of distance education.

Informatization of teaching certain academic disciplines based on information computer technologies (ICT) can lead to a significant improvement in the quality of university education, since a modern student needs not only free access to up-to-date information of various contents, but also free operation of scientific knowledge and applied data, which becomes problematic in the modern educational process outside of ICT. Moreover, the use of ICT in various spheres of human activity, among which education plays a key role in the development of the information society, will remove some contrast of natural science and humanities knowledge and cognition.

Work on the organization of distance and telecommunication training is quite actively conducted abroad. There is a well-known experience in organizing an integrated computer training system based on multimedia educational tools, equally relevant to the humanities and natural sciences. In France, under the auspices of the National Ministry of Education, learning (training) of university students, including humanities faculties, is organized, mainly on the basis of multimedia encyclopedias and specially organized search and training systems, especially effective in conditions of increasing the proportion of students' independent work, when the need of DE is obvious.

The transformation of modern society, and with it the inclusion of universities in the information community, allows and provides for the anticipation of major social changes. The most important of them include the following:

1. Every person, group or organization from any place and at any time on the basis of automated access gets access to any information necessary for the implementation of their life and the solution of private and socially significant tasks. The education system, at a minimum, needs to prepare the younger generation for the necessary manipulations that provide a full range of activities and open access to information and work with it.

2. The implementation of the previous thesis is impossible without functioning in the information technology community. The availability of such technology already requires a certain standardization and unification of educational software in accordance with the changes that the information society brings to the world.

3. There should be conditions in the community that ensure the creation and functioning of national information resources that provide:

a) scientific and technological needs of the country;

b) management of the social sphere of life;

c) development of the national economy and culture.

The fundamental task of the education system is to prepare young people for life in a rapidly changing social environment, since the lag in the field of informatization, in general, and in the education system itself, in particular, at some point may become historically irreversible and uncompensated.

Education is an integral part of the social sphere of society, and therefore the main problems, ways and stages of informatization for education basically coincide with the general provisions of informatization of society as a whole.

The process of informatization of education is carried out in two main directions:

1) uncontrolled informatization, which is implemented from below on the initiative of teaching staff and covers, according to the teacher, the most relevant areas of activity and subject areas;

2) managed informatization, which is supported by material resources and, in accordance with general principles, has a concept and a program.

In the program of informatization of education, a special place is occupied by the subprogram for the development and implementation of information technologies in education.

In relation to the educational process and scientific research, new information technologies are of fundamental importance.

Unlike traditional educational technologies, information technology has information as the subject and result of labor, and a computer is the instrument of labor.

Any information technology involves two problems:

1) solving specific functional problems of the user;

2) organization of information processes supporting the solution of these tasks.

By nature, all tasks are divided into *formalizable* and *difficult to formalize*. For **formalized problems**, a typical solution sequence is known, which includes the formation or selection of a mathematical model, the development of an algorithm, a program and the implementation of calculations. In most curricula of disciplines, such tasks take place, and therefore the use of information technology for these tasks is traditional and widely used, and is currently developing.

Much more complex are **difficult-to-formalize tasks**, which include tasks that do not have precise mathematical models during formalization, and therefore are solved on the basis of knowledge representation models such as logical, semantic, frame. On the basis of these models, the transformation of a difficult-to-formalize problem into elementary problems and their logical solution is carried out. As a result, knowledge bases are formed in the structure of expert systems and other types of intelligent systems for educational and scientific purposes.

The organization of information processes within the framework of information educational technologies involves the allocation of such basic processes as transmission, processing, organization of data storage and accumulation, formalization and automation of knowledge.

The improvement of methods for solving functional tasks and ways of organizing information processes leads to completely new information technologies, among which, in relation to learning (training), the following can be distinguished:

1. Computer training programs, including electronic textbooks, simulators, laboratory workshops, test systems.
2. Learning (training) systems based on multimedia technologies, built using personal computers, video equipment, optical disk drives.
3. Intelligent and educational expert systems used in various subject areas.
4. Distributed databases by branches of knowledge.
5. Telecommunication tools, including e-mail, teleconferences, local and regional communication networks, data exchange networks, etc.
6. Electronic libraries, distributed and centralized publishing systems.

Computer training is really effective, contributes to the implementation of the well-known didactic principles of the organization of the educational process, fills the activity of the teacher with fundamentally new content, allowing them to focus on their main teaching, educational and developmental functions.

6.3. Practical class

Questions for discussion

1. The concept of pedagogical technology. Criteria for the effectiveness (methodological requirements) of technologies. Classification of technologies.

2. Technologies of problem-solving, active learning.

3. Heuristic training as a basis for creative the student's self-implementation.

4. Imitation and non-imitation technologies.

5. Informatization of the educational process of the university. Didactic requirements for the development and use of computer learning tools.

6. Distance and combined learning at university. The use of Internet resources in the educational process. Interactive learning (training) with operational feedback.

Practical tasks

1. Analyze and present in the form of a table the advantages and limitations of distance and combined learning technologies for students.

2. Analyze and present in the form of a table the advantages and limitations of using Internet resources in the educational process.

3. Prepare an essay on the topic "The model of the University of the XXI century".

Situational tasks

1. The supervisor (curator) of the study group found in one of the social networks a video posted by students with a fragment of a training class, which presents the incorrect behavior of one of his fellow teachers. What should a supervisor (curator) do in such a situation?

2. A young teacher who has been working for several years gives a second or third lecture on an economic discipline to correspondence students. The audience is mainly young guys and girls, yesterday's schoolchildren with insignificant work experience. However, several people belong to an older age. At the end of the first hour, the teacher asked the audience if everything was clear and what questions they had. After some silence, one of the senior correspondence students stood up and said: "Everything you said may have meaning, but it is purely theoretical. In practice, there is nothing of this, and therefore we all do not need it at all". At this moment, many students smiled and curiously waited for the teacher's answer. What are the possible actions of the teacher and their consequences?

TOPIC 7. INNOVATIONS IN HIGHER EDUCATION AND PEDAGOGICAL ACTIVITY OF A UNIVERSITY TEACHER

7.1. The concept of innovation. Levels of development of components of innovative activity.

7.2. The content of the teacher's innovative activity. Characteristics of the main directions of innovative processes. The main types of innovative pedagogical activity.

7.3. A university teacher's competences and their essence.

7.4. Practical class.

7.1. The concept of innovation. Levels of development of components of innovative activity

It is impossible to train a modern specialist for a *traditionally* working teacher. Unfortunately, the teaching staff, for the most part, still maintains a conservative approach of "transferring the sum of knowledge" to students. The situation is worsened by weak attempts to introduce innovative approaches in the process of professional training of future university teachers and in the system of advanced training and retraining of the teaching staff, which in practice predetermines the episodic nature of innovation, its implementation by "trial and error" method. In this regard, the need for training teachers capable of carrying out innovative activities in education is being enhanced.

Innovative activity is an activity aimed at transforming, changing existing forms and methods of teaching, developing new goals and means of its implementation. The following structural components of innovative activity are distinguished: *motivational*, *creative*, *technological and reflexive*, which were the basis for the formation of teachers' readiness (willingness) for innovation.

The **motivational component** includes the teacher's attitude to innovation, the need to implement innovative activities.

The **creative component** is the most important characteristic of innovative activity and reflects the teacher's activity in mastering and creating new things in the professional sphere. Creativity is directly related to the introduction of transformations, changes in the existing experience of the teacher.

The **technological component** determines the technological readiness (willingness) of the teacher to implement innovative activities.

The **reflexive component** indicates the teacher's ability to give an adequate assessment of his activities and professional capabilities, to exercise conscious control of innovative changes that have occurred in the educational process, to look for new means of its implementation and improvement.

Since the integrity of any system is achieved by the relationship between structural and functional components, the preparation of a teacher for the implementation of innovative activities is presented as a step-by-step dynamic innovative process of transformation and professional self-development of the individual, in which the following stages are highlighted: *motivational*, *creative*, *technological and reflexive*. Each of them includes a set of components: goal – means – result. At the same time, *four* levels of development of each of the components of innovative activity are distinguished: *adaptive, basic, professional, creative.*

Adaptive level. Teachers of this level are characterized by an unstable attitude to innovation. The desire to implement innovative activities is episodic, most often under pressure from outside. Creative activity is minimal, it is mainly associated with copying innovative technologies, forms, methods, techniques, copying someone else's experience. Technological readiness (willingness) is manifested in the use of their own developments and the repetition of their experience. Reflexive readiness (willingness) is characterized by the presence of individual reflexive knowledge and skills, however, the reflection of their activities is carried out by teachers occasionally and not always efficiently.

Basic level. Teachers of this level are characterized by "openness" to innovation, they have formed a positive motivation for everything new in pedagogy. Creative activity is associated with creative imitation: teachers slightly modify someone else's experience, introduce some of their own elements, methodological techniques, without changing the approaches to teaching and upbringing in general. Technological readiness (willingness) is characterized by the presence of knowledge on the basics of pedagogical innovation and skills in the application of innovative technologies. Reflexive readiness is expressed by the formation of teachers' understanding of the need to reflect on their activities and evaluate the innovations being introduced. Teachers of this

level have formed reflexive knowledge and skills, the need for self-improvement is implemented.

Professional level. Teachers of this level have a steady desire to implement innovative activities. They successfully solve professional tasks, develop innovative content, forms, methods, techniques. Creative activity manifests itself in the formation of a teacher's personality as a subject of innovation. Technological readiness (willingness) is associated with the availability of broad knowledge and skills in the implementation of innovative pedagogical activities, the search for new solutions in its implementation. Teachers of this level constantly evaluate and correct professional activity, analyze its shortcomings and achievements, including those related to innovations. They are open to new things, actively carry out self-improvement.

Creative level. Teachers of this level are deeply aware of the potential of innovative activity, have a strong need for its implementation. They creatively solve professional tasks, creates author's concepts, methods of teaching and upbringing. They are able to carry out and correct innovative activity at all its stages: at the stage of analysis, goal setting, implementation of innovative actions, control. They successfully analyze innovative activity and use the data obtained to increase its efficiency, actively self- implement themselves in innovative activity.

A teacher's innovative activity is a complex integrative type of pedagogical activity aimed at ensuring innovative development and improving the quality of professional education through the development and application of various innovations in the process of future specialists' professional training. In other words, it is a purposeful activity to use a variety of innovations to improve the quality of professional training.

Innovation in this case is the process and result of purposeful, efficient changes based on innovations, providing qualitative renewal and development of individual components and an integral system of professional pedagogical education.

At the same time, innovation is understood as an idea, the result of applied and fundamental research, experimental and theoretical developments in the field of education, upbringing, management, information technology, which, when mastered, leads to an increase in the efficiency and development of the pedagogical education system.

7.2. The content of the teacher's innovative activity. Characteristics of the main directions of innovative processes. The main types of innovative pedagogical activity

The content of the teacher's innovative activity consists in the continuous updating of educational programs and ways of their development due to various innovations, which ultimately leads to an increase in the quality of professional training and the development of pedagogical education in general.

The teacher's innovative activity is a condition for his continuous personal and professional development and becomes the main tool for qualitative changes in the system of pedagogical education, which is based on the rejection of stereotypes in the profession, going beyond the existing mechanisms, finding new original ways to solve professional problems.

Currently, there is a rapid shift of the teacher's function in the educational process: the teacher is transformed from a translator of knowledge and a sample of skills into a leader of active students' independent work; he increasingly acquires the role of an expert, consultant. In this regard, the content of pedagogical activity is changing, which is increasingly acquiring an innovative character, which is manifested in:

– reducing the importance of traditional forms of work – lectures and practical classes. This led to the need to highlight the contact forms of the teacher's work;

– increasing the role of methodological and research work aimed at organizing and ensuring the students' independent work;

– the need for flexibility and individualization of the educational process, including the widespread use of ICT and the implementation of individual educational trajectories of students;

– creating conditions for students' academic mobility.

A holistic understanding of the essence of innovative activity in higher education begins with the disclosure of the leading contradictions that are the internal impulse of their development and arise between:

– existing innovative processes in engineering, technology, economics, society, culture and the existing future specialists' training for innovative activities;

– the pace of innovative changes and the need to provide high-quality advanced training that allows a university graduate to effectively adapt to the conditions of innovative production, successfully solve professional

tasks, carry out self-implementation and self-development in an information high-tech society;

– the complexity and innovativeness of the tasks of professional training and education in modern conditions and the inability of the traditional solution of this problem, etc.

Innovations and innovative processes in the system of professional and pedagogical education are directly influenced by such essential characteristics of professional and pedagogical education as:

– a combination of sectoral, psychological and pedagogical training and training in the working profession of graduates, while the system-forming is psychological and pedagogical training, which methodologically ensures the purposefulness of sectoral and industrial and technological training;

– deep interdependence of professional and pedagogical and primary and secondary vocational education, the need for flexible orientation to the needs of the labor market;

– integration with science, production, economy, social spheres;

– a feature of the types of professional activities of graduates, such as the development of production and technical, methodological, instructional and technological documentation, the operation and maintenance of training equipment, the development of new equipment and technology, etc.;

– features of professional training of teachers of vocational training, which should provide specialists' multidisciplinary professional mobility, the ability to carry out research, scientific, methodological, scientific and production activities.

The main features of innovative processes in professional and pedagogical education are determinism by the development of the economy, science, production, society, their initiability and manageability in accordance with the goals and needs of society, which is characterized by the acceleration of scientific and technological progress, informatization, globalization, technologization and automation of all spheres of human life. The strengthening of the humanistic orientation of education, its informatization and technologization, the integration of science, education, science and production, the development of a unified information and educational space, the creation and development of new conditions and institutions of innovation in the field of science, education and production, forming innovative intra-university and regional innovation infrastructure,

lead to the need to modernize professional and pedagogical education through innovation.

In this regard, the main directions of innovative processes to achieve a new quality of professional and pedagogical education corresponding to the world level are currently the following:

– improvement of the components and structures of professional and pedagogical education, their modernization in accordance with the goals and objectives of the innovative strategy of the state;

– development of ways, methods, forms of integration of professional and pedagogical education with scientific, industrial, economic, social structures;

– development of lifelong (continuous) multi-level professional and pedagogical education and strengthening of interrelations with primary and secondary vocational education;

– creation of a uniform educational and information environment at university, development of a uniform educational space in the region.

Innovative development of professional and pedagogical education is carried out through the participation of engineering and pedagogical personnel in regional development programs, the creation of the university's effective innovative infrastructure integrated into the economic space of the region, participation in large-scale innovative projects, the use of modern educational and management technologies in the educational process and active international activities. The leading trend of innovative processes in professional and pedagogical education at the present stage is the transition from personal to state and state-public character of the formation and implementation of innovative initiatives and projects.

Innovative processes in professional and pedagogical education receive practical implementation in innovative professional and pedagogical education, the purpose of which is to prepare a universal morally mature personality, a competent specialist with a developed professional culture, possessing a scientific style of thinking, capable of implementing innovative processes in professional education, production, economy, society.

It can be rightfully argued that a teacher's activity is increasingly acquiring innovative features, allowing them to solve new tasks that have not been encountered in educational practice before. Analyzing the content and functions of a modern teacher, it is possible to formulate the **types of innovative pedagogical activities** that ensure the achievement of the required quality of professional training:

1. Activities to update the content of educational programs. This type of activity is aimed at creating in-demand interdisciplinary educational programs involving different levels of assimilation and different trajectories of mastery. The content of modern educational programs should meet regional requirements, the needs of students, parents, employers, network partners and be designed on the basis of educational results.

2. Activities to improve the organization of the educational process. This type of activity is aimed at ensuring flexibility, accessibility, lifelong (continuity) of educational programs and implies the creation of conditions for the implementation of various educational trajectories, increasing access to educational products using ICT and network resources.

3. Activities on the application of innovative educational and evaluation (assessment) technologies. This type of activity is aimed at the effective use of various educational technologies in the educational process (problem-based learning, discussions, work in small groups, project training, business games, case-study, etc.). In addition, the technologies for evaluating learning outcomes are also changing – there is an orientation towards mastering not knowledge, but competencies, the success of learning is determined by the dynamics of the results of a particular student, the use of mutual and self-assessment tools is expanding. The teacher should use such modern assessment tools as a rating system, testing, portfolio, expert assessments, itinerary, evaluation sheet, etc.

4. Activities aimed at ensuring networking and academic mobility. This type of innovative activity consists in the active participation of a teacher in networking in the form of joint educational, research, social projects, as well as in academic mobility, creating conditions for the exchange of pedagogical experience, the development of new educational programs and technologies, and raising the cultural level.

7.3. A university teacher's competences and their essence

In recent years, several competence systems of university teachers have been proposed. However, the difficulty in identifying the most common teachers' professional and personal competencies, which researchers constantly face, is related to the variety of curricula (educational programs) offered by higher educational institutions, the multidimensional nature of the activities performed (educational, teaching and methodological, research, educational (upbringing),

agitation, adaptation and advisory, etc.), constantly changing functions and increasingly complex roles of the teacher in the process of globalization and commercialization of the university.

According to the analysis of more than 30 national, regional and university documents published in the USA, Great Britain, Australia, Singapore, India, France, Germany and other countries and reflecting the attempts of scientists to solve this difficult problem, today efforts to compile a list of university teachers' competencies are aimed at solving the following tasks:

1. To promote the growth of the quality of education and increase the rating and attractiveness of the university.

2. To develop and implement a professional standard for university teachers, which, in the context of global standardization and identification of qualification requirements for all specialties, is, on the one hand, a tool for managing the quality of education, and on the other hand, provides this process with a continuous character.

3. To create a system of clear and transparent criteria for the promotion of teachers and the improvement of the personnel policy of universities.

4. Qualitatively change the system of professional development and give it the character of lifelong education in order to continuously improve existing competencies and acquire new ones.

5. To help the teacher find his place in today's ever-changing world and in the face of ever-increasing demands on his work; demonstrate to him the real potential of opportunities for professional growth and self-development.

In most countries, the word "competencies" is very rarely used in relation to a university teacher, more often they talk about his efficiency (efficient teacher) or professional duties (duties). The most common is the enumeration of the skills and abilities of the teacher by his main activities, while the higher the position of the teacher in the academic hierarchy is, the more emphasis is shifted on his achievements in scientific work compared with methodological success in conducting classes.

In psychological and pedagogical literature, as a rule, the following competencies of a university teacher are distinguished:

1. *Special competence.* The teacher possesses a high level of professional competence and is engaged in self-development, as well as he has excellent communication skills.

2. *Social competence*. The teacher owns a joint professional activity, cooperates with others and is responsible for the results of his work.

3. *Personal competence*. The teacher knows the ways of personal self-expression and self-development. This is an interesting, bright personality.

4. *Methodological competence*. The teacher knows the methods and techniques of teaching, has the intuition of choosing a method.

5. *Psychological and pedagogical competence*. The teacher knows the psyche of students, is able to determine the individual qualities of each student.

A teacher's innovative activity is a necessary condition for high quality of pedagogical education, since it ensures the full implementation of the popular pedagogical training programs, is aimed at meeting the demand for high-quality pedagogical education, ensures the formation of necessary competencies and the development of students' personality, contributes to the development of the pedagogical education system.

7.4. Practical class

Questions for discussion

1. The concept of innovative activity. Innovations in the education system. Classification of innovations in the educational process.

2. Innovative trends in higher education.

3. Innovative process and innovative activity. Methodology and stages of implementation of innovative pedagogical experience.

4. The content of the teacher's innovative activity. The main types of innovative pedagogical activity.

5. Motivation of innovative activity. Creativity as the most important characteristic of the teacher's innovative activity.

Practical tasks

1. Fill in the following table

Factors (conditions) stimulating a higher school teacher to innovate	Factors (conditions) hindering the introduction of innovative pedagogical experience
1.	1.
2.	2.
…	…

2. Prepare an essay on the topic "Conditions for the formation of a university graduate's readiness for innovative and commercial activities".

3. Complete a survey "Scale of readiness for creative and innovative activity" (S. Yu. Stepanov).

Scale of readiness for creative and innovative activity
S. Yu. Stepanov

Instruction. This questionnaire is designed to study the degree of readiness of your team for changes in the organization. When filling out the questionnaire, try to reflect your own point of view. The questionnaire consists of 20 items, each of which is represented by two statements. Below them there is a scale from 1 to 10. A score of 1 means your full agreement with the statement on the left, a score of 10 means that you fully agree with the statement on the right, the scores between the extreme grades correspond to different degrees of your agreement with the statements on the left or right. On the sheet below, circle the selected numbers of the scale that most correspond to your opinion. Thank you for your work!

№	Statements									
1	You don't understand why you need to develop creativity					You don't understand why you need to develop creativity				
	1	2	3	4	5	6	7	8	9	10
2	It is not clear to you why you need an innovative search in your professional activity					It is clear to you why you need an innovative search in your professional activity				
	1	2	3	4	5	6	7	8	9	10
3	You are watching the innovative process "from the outside"					You are the initiator of innovative searches in your team				
	1	2	3	4	5	6	7	8	9	10
4	You think that if the creative search in the team ends in failure, it will be extremely difficult to get rid of the consequences					You think that if the creative search in the team ends in failure, it will be easy to correct the consequences and move on				
	1	2	3	4	5	6	7	8	9	10

5	You think that developing your innovative skills will require a lot of effort					You don't think that developing your innovative skills will require a lot of effort				
	1	2	3	4	5	6	7	8	9	10
6	You are not sure that the efforts spent on innovation will pay off					You are sure that the efforts spent on innovation will pay off				
	1	2	3	4	5	6	7	8	9	10
7	You think that innovation is not in line with the values of the team you work for					You think that innovation is in line with the values of the team the team you work for				
	1	2	3	4	5	1	2	3	4	5
8	You see little support for your creative endeavors from significant people in the team					You see strong support for your creative endeavors from significant people in the team				
	1	2	3	4	5	1	2	3	4	5
9	You believe that as a result of innovation, relationships in the team that are significant to you will worsen or remain bad					You believe that as a result of innovation, relationships in the team that are significant to you will improve or remain good				
	1	2	3	4	5	1	2	3	4	5
10	You are sure that there will be no necessary organizational support in creative endeavors					You are sure that there will be necessary organizational support in creative endeavors				
	1	2	3	4	5	1	2	3	4	5
11	You expect that the creative activity of your team will negatively affect the school budget					You expect that the creative activity of your team will positively affect the school budget				
	1	2	3	4	5	1	2	3	4	5
12	You think that the current pace of innovation in your team is lower or higher than necessary					You think that the current pace of innovation in your team is optimal				
	1	2	3	4	5	6	7	8	9	10
13	You think that your typical style and work experience are incompatible with creative activity in a team					You think that your typical style and work experience are compatible with creative activity in a team				
	1	2	3	4	5	6	7	8	9	10

14	You think that as a result of the spread of innovations in the team, independence, the possibility of initiative, feedback and the importance of your work will decrease					You think that as a result of the spread of innovations in the team, independence, the possibility of initiative, feedback and the importance of your work will increase				
	1	2	3	4	5	6	7	8	9	10
15	You treat creative search in a team as an "event for the sake of an event" that should be ignored or endured					You treat the creative search in the team as an event that deserves attention				
	1	2	3	4	5	1	2	3	4	5
16	You are afraid of any failure associated with creative transformations					You are not afraid of any failure associated with creative transformations				
	1	2	3	4	5	1	2	3	4	5
17	You think that if not everything works out in the process of spreading innovations, then it is necessary to return to the old reliable methods of work					You think that if not everything works out in the process of spreading innovations, then this is natural, and you need to continue the search				
	1	2	3	4	5	1	2	3	4	5
18	You have little confidence in your ability to participate in a joint creative search in the team					You are confident in your ability to participate in a joint creative search in the team				
	1	2	3	4	5	1	2	3	4	5
19	You think that the creative search in the team threatens your legitimate interests					You think that the creative search in the team doesn't threaten your legitimate interests				
	1	2	3	4	5	6	7	8	9	10
20	You don't see that the goals of creative activity and your personal goals are consistent					You see that the goals of creative activity and your personal goals are in good agreement				

Processing of results

The questionnaire is designed to study the teacher's readiness for changes in an educational institution and in their own activities.

During processing, it is necessary to summarize the points marked by the test subject for all points of the methodology. The following quantitative indicators indicate the level of readiness for creative and innovative activity:

– from 0 to 80 points – a low level;
– from 81 to 140 points – an average level;
– from 141 to 200 points – a high level.

TOPIC 8. THE ESSENCE OF THE PROCESS OF EDUCATION (UPBRINGING) AT UNIVERSITY

8.1. The essence of the process of education (upbringing). The main structural elements and regularities (laws) of education (upbringing).

8.2. The basic principles, tasks and functions of education (upbringing).

8.3. The pedagogical essence of the content of education (upbringing).

8.4. Methods of education (upbringing) and their essence.

8.5. Practical class.

8.1. The essence of the process of education (upbringing). The main structural elements and regularities (laws) of education (upbringing)

In the context of social transformations in society, a person is required to be active, mobile, ready to live in a multicultural and rapidly changing world, responsible for choices and decisions made. An important role is played by the personal position of a growing person in mastering the humanistic and moral-legal norms (rules) operating in society; becoming a subject of civil, professional, family spheres of one's own life. Therefore, it is relevant to change the traditional paradigm of upbringing, which is characterized by social orientation, unconditional authority of the teacher, reproduction in the transferring values and experience in the upbringing process, identification of state and personal interests.

The new upbringing paradigm assumes:

– an attitude towards equality of various types of socially acceptable upbringing experience (education based on folk traditions, secular education, religious education);

– the focus of pedagogical efforts on building social value orientations by the student himself;

– tolerant attitude to dissent (opposition), which does not promote cruelty, violence, aggressiveness towards others;

– dialogism of cultural positions, their productive cooperation;

– mastering by teachers the position of mediator between the student and culture;

– orientation towards the formation of scientific, pluralistic thinking;

– ensuring the rights of the child and the person;

– providing the student with the opportunity for self-determination and responsible choice;

– unity of individual and collective experience of all participants in the upbringing process.

The main idea of new methods and technologies of upbringing should be the management of the initiative of the student himself in the process of pedagogical interaction. On the part of the teacher, this involves both helping and supporting him, and creating conditions for self-implementation. This approach contributes to the self-determination of the individual, stimulating a free and responsible act.

In accordance with this paradigm, the main structural elements of the concept of "education (upbringing)" are: the values of upbringing, the upbringing environment and the upbringing process.

Values of upbringing are natural, material, moral and spiritual objects or phenomena that are significant for a person, acting as socio-cultural patterns of life, on which educational theories, methods and technologies of pedagogical activity are oriented.

Upbringing environment is such an organization of the social environment when all the diversity of human relationships and material objects in a conscious or unconscious form carries educational functions. The most important component of the upbringing environment is the psychological and pedagogical atmosphere – a set of emotional relationships between the teacher and the student, arising on the basis of trust, respect, cooperation and mercy.

Upbringing process is a purposefully organized process of interaction aimed at meeting the needs of its participants. The condition for the effectiveness of the upbringing process is the organization of the activities of the educated person to acquire a system of personally and socially significant values, and the desired result for society is the formation of life skills, a positive attitude to creative activity, nature, society, and oneself.

Upbringing at university is a purposeful, specially organized process of interaction between a teacher and students, the organization of their various activities in order to form their political, moral, aesthetic, physical qualities, the development of their abilities and essential forces, the formation of relationships with the outside world and people.

Upbringing, like any pedagogical activity, is based on the relevant regularities (laws) and methodological principles, involves the development of adequate goals, tasks and performs specific educational functions.

Pedagogical regularities (laws) of education (upbringing) are objective, essential, stable connections of the upbringing process, which reflect the interrelationships of its structural components and characterize the essence of the functioning and development of the process of upbringing itself.

The following *regularities (laws) of upbringing* can be distinguished:

1. The goal, tasks and content of education are determined by the objective needs of society, socio-cultural and ethnic norms (rules) and traditions.

2. The development of a child (schoolboy, student) and the formation of his personality occur unevenly, which is associated with the inconsistency of verbal, sensory and motor personality processes.

3. The upbringing of a child (schoolboy, student) as the formation of socio-psychological neoplasms in the structure of his personality is carried out only through the activity of the child himself. The measure of his efforts should upbringing is determined by the degree of self-activity of the person being brought up.

Any educational (upbringing) task is solved through active actions: physical development – through physical exercises, moral – through constant orientation to the well-being of another person, intellectual – through mental activity, solving creative tasks. At the same time, it is important to observe the proportional ratio of the efforts of the student and the efforts of the teacher in joint activities: at the initial stage, the share of the teacher's activity exceeds the student's activity, then it decreases with increasing activity and independence of the student. Shared activity helps a student to feel like a subject of activity, which is a condition for the free creative development of the individual. At the same time, the teacher should feel and determine the limits of the measure of his own participation in the student's activity, indirectly manage this activity and provide students with the full right to creativity and free choice. Thus, the effectiveness of upbringing depends on the optimal organization of joint activities and communication of teachers and students.

4. The content of the activities of children (schoolchildren, students) in the process of their upbringing is determined at each given moment of development by the actual needs of the pupil's personality. Being ahead of actual needs, the teacher risks to meet resistance and passivity of pupils. If you do not take into account the age-related changes in the needs of the brought up person, as well as her interests and capabilities,

then the process of upbringing becomes difficult and disrupted. Thus, *the effectiveness of upbringing is conditioned by taking into account the needs, interests, and capabilities of the person being brought up.*

5. The integrity of personality prescribes to teachers the integrity of upbringing influences; as well as taking into account objective and subjective factors in the upbringing process.

8.2. The basic principles, tasks and functions of education (upbringing)

The goal of upbringing is the formation of a mentally, spiritually and physically mature creative personality, the subject of his own life. An intellectually, spiritually and physically mature creative person is a person with a high level of culture, possessing creative potential, capable of self-education, free and responsible behavior, with the inherent qualities of a citizen, patriot, worker and family man.

The principles of upbringing are the main initial, provisions, ideas that determine the process of upbringing students, its direction, content, choice of methods, tools and forms.

The main principles of upbringing in modern conditions are:

1. The principle of scientific approach as a reliance in the upbringing process on the psychological and age-and-gender characteristics of children and young students, the teacher's use of the achievements of pedagogical, psychological and other human sciences.

2. The principle of conformity to nature is a pedagogical principle, according to which the educator (a teacher) in the upbringing process is guided by natural development of the child. It means that he takes into account not only the natural inclinations of the individual, but also the psycho-physiological capabilities of the pupil (student) and their conditioning by informational and social phenomena.

3. The principle of cultural conformity, manifested as a combination of all forms of spiritual life of society, which determine the formation of personality, socialization of the younger generation, based on the values of national and world culture. This principle presupposes the teacher's constant professional attention to the pupil's emerging attitudes to socio-cultural values (man, nature, society, labor, knowledge) and the value foundations of life (goodness, truth, beauty).

4. The principle of non-violence and tolerance presupposes a humane attitude and tolerance of the educator towards the pupil (student), his individuality; rejection of any forms of psychological and physical violence. Only in conditions of love and protection, the child freely expresses his relationship, develops in a favorable way. Therefore, upbringing presupposes the teacher's manifestation of love for the child (student), the ability to understand him, help him, forgive his mistakes, protect him.

5. The principle of the connection of upbringing with life is manifested in the teacher's consideration of the economic, social, environmental, demographic and other living conditions of pupils (students).

6. The principle of transparency of upbringing processes and systems presupposes the best combination of various upbringing models with the person's life experience, his real life activity. At the same time, the teacher extremely contributes to the development of the child's (schoolboy, student) ability to realize his "Self" in connection with other people and the world, to comprehend his actions, to foresee their consequences for other people and his fate, to make a meaningful choice of life decisions. This principle excludes a strict order to the students, and assumes a joint search for solutions with them.

7. The principle of variability of upbringing **activity** means that its content and forms correspond to changing children's (youth) needs, interests, opportunities.

Upbringing is based on universal, humanistic values, cultural and spiritual traditions of the Belarusian people, state ideology, reflects the interests of the individual, society and the state.

The main *requirements for upbringing* are:

– compliance of the content, forms and methods of education with the goals and tasks of education;

– consistency and unity of pedagogical requirements;

– continuity (succession), lifelong (continuity) and consistency of the implementation of the content of education, taking into account the age and students' individual characteristics;

– creating conditions for the development of students' creative abilities, engaging them in various types of socially significant activities.

The most important *tasks of upbringing* are:

1. Moral development of the individual, which presupposes awareness by students of the fact that many cultures coexist and interact in the world. Each of these cultures has its own ideals, a system of

spiritual and moral values; upbringing of moral qualities (conscientiousness, mercy, dignity, love, kindness, diligence, decency) and the formation of experience of moral behavior.

2. The formation of patriotism and citizenship based on love for their land, people, language, respect for the history of their Fatherland, national culture, traditions, customs. Upbringing young people of civil duty, responsibility, courage based on knowledge of civil law and duties.

3. The formation of labor and life skills means the upbringing of students' creative attitude to work, determination, diligence, responsibility; the development of their skills to predict personal and collective labor success, the ability to constantly self-educate self-service skills and safe behavior.

4. Formation of responsible behavior, manifested in the ability to control oneself, one's natural needs and inclinations, to manifest oneself as a subject of activity, communication, culture, to show self-activity and creative abilities, to comply with the rules and norms of the co-residence. The formation of responsible behavior means the development of skills to develop goals and project activities for their implementation, to carry out reflection, self-control and self-assessment of the results achieved, to solve problems in new conditions, to communicate productively and resolve conflicts in a non-violent way.

5. Formation of a healthy lifestyle, manifested in relation to one's health as a vital value, skills and abilities to lead a healthy lifestyle, strengthen reproductive health.

6. The development of the emotional sphere of the child's personality, carried out primarily in intimate family relationships based on love, care, warmth, nonviolence.

7. The development of a sense of beauty by means of nature, art, and the surrounding subject environment, which increase the activity, effectiveness, and creative nature of student's activities and form the ability to see, love and appreciate beauty in all spheres of their life, work, and communication.

8. The development of ecological consciousness, which provides for the creation of conditions for students and young people to acquire relevant knowledge and practical experience in solving problems in this area; the formation of value orientations of an ecological nature and habits of environmentally appropriate activities; the ability to cause-and-

effect analysis of situations and phenomena in the "man – society – nature" system and the choice of ways to solve environmental problems.

The goal and role of upbringing are manifested in its ***functions***:

1. The function of development involves a change in the orientation of the student's personality, the structure of her needs, motives of behavior, abilities, etc.

2. The function of formation appears as a specially organized process of presentation by a teacher to a child (student) of socially approved values, normative personality qualities and behavioral patterns for his personal, civil and professional growth.

3. The function of socialization is to ensure the assimilation of social experience and the development of their own value orientations together with adults in the process of joint activities and communication.

4. The function of individualization appears as a process of formation of the "I-image", the spiritual world of the individual, the implementation of his social roles and relationships based on his mental and social experience and the experience of other people and previous generations.

5. The function of psychological and pedagogical support is manifested as assistance to children and students in solving their individual problems related to psychophysical and moral health, learning, interpersonal relationships and communication, professional and life self-determination.

The subject of pedagogical support is the process of jointly determining with the student his own relevant interests, goals, opportunities and ways to overcome obstacles (problems) that prevent him from preserving his human dignity in various difficult situations and independently achieve the desired results. Psychological support is also aimed at solving the problems of the maturing personality associated with life crisis events, difficulties of social adaptation.

6. The humanistic function of upbringing is to ensure the rights of the child (student), to satisfy his needs for security, emotional comfort and independence, to preserve health, to determine the sense of life, to provide personal freedom.

7. The culture-forming function of upbringing manifests itself in the preservation, reproduction and development of culture, assumes orientation to the upbringing of the individual as a subject of culture.

8.3. The pedagogical essence of the content of education (upbringing)

The content of upbringing is dynamic, it is determined by the needs and interests of a growing personality, universal values and basic components of personality culture, which, having developed in ancient times, remained unchanged.

It is possible to distinguish several main components of personality's culture, in the process of formation of which the content of upbringing is implemented.

1. Moral and ethical culture.

The content of upbringing activities includes:

– formation of ideas and concepts about the moral foundations of life;

– assimilation of the idea of national identity as a factor of the moral culture of the people;

– formation of a culture of interpersonal relations and joint activities in the team;

– development of ethical thinking, moral feelings, motives of behavior;

– upbringing of high moral qualities: kindness, mercy, tolerance, politeness, conscientiousness, decency, dignity and more;

– formation of norms (rules) of behavior.

Criteria for the formation of moral and ethical culture:

– formation of leading moral qualities;

– development of ethical standards of behavior;

– the ability to understand a person and empathize with him;

– accuracy and commitment in promises;

– kindness towards people; manifestation of a sense of solidarity and collectivism in everyday life;

– manifestation of material and spiritual generosity;

– observance of etiquette.

2. National culture.

The content of upbringing activities includes:

– introducing children and students to the values of national culture;

– self-determination and self-implementation of the individual.

Criteria for the formation of national culture:

– development of national identity;

– respect for the culture of the national majority;

– interest in the language, history and culture of Belarus;

– respect for traditions and customs, norms (rules) and laws of life of people of other nationalities;

– continuity (succession) in the development of cultural and historical experience and relationships with the older generation;

– participation in creative, transformative activities for the benefit of national culture.

3. Civil culture.

The content of upbringing activities includes:

– formation of responsibility for the fate of the fatherland;

– assimilation by children and young students of knowledge about their rights and responsibilities and upbringing of the need to implement them in everyday life;

– stimulating political, economic, social, environmental activity, developing a sense of respect for the laws of the state, the attributes of statehood;

– formation of legal awareness, law-abiding (respect for laws) and a sense of patriotism.

Criteria for the formation of civil culture:

– knowledge of the Constitution of the Republic of Belarus, civil rights and obligations, trends in the development of a civil democratic society; law-abiding (respect for laws);

– willingness to actively participate in the management of affairs both at the personal level and at the social level (group, educational institution, association);

– awareness of your own rights and responsibilities;

– formation of the need to defend the interests of the Republic of Belarus.

4. Psychological and pedagogical culture.

The content of upbringing activities includes:

– formation of readiness to live and work in a rapidly changing world;

– formation of skills and abilities of effective adaptation to changing conditions of life.

Criteria for the formation of psychological and pedagogical culture:

– knowledge of a person's mental life, basic psychological phenomena;

– mental and social adaptability;

– stress resistance;

– the ability to self-regulation and self-upbringing;

– readiness for continuous self-education;

– ability to collaborate and communicate;

– socially oriented behavior; developed level of self-awareness.

5. Work (labor) culture.

The content of upbringing activities includes:

– formation of positive motivation and readiness for work (labor) in children and students;

– formation of self-management skills and abilities in the course of work (labor); creative attitude to work (labor).

Criteria for the formation of work (labor) culture:

– readiness for independent working life;

– creative approach to work (labor); ability to work in a group, perform executive and managerial duties and functions in joint activities;

– develop goals and projects of activities to achieve them;

– skills of reflection and evaluation of the labor process, its results;

– high-quality and responsible performance of work;

– professional safety skills.

6. Culture of family relations.

The content of upbringing activities includes:

– formation of children's and students' attitude to the family as the most important value, the need to strengthen family relations and maintain traditions, awareness of oneself as a member of the family and the genus;

– formation of skills in helping your loved relatives, fulfilling the family's lifestyle, arranging your home;

– developing a sense of duty to preserve the honor and dignity of your family;

– formation of readiness for family life.

Criteria for the formation of family relations culture:

– understanding the culture of family relations;

– knowledge of your ancestry, family traditions and relics;

– participation in household management and taking on permanent household responsibilities;

– skills of caring for young children;

– providing regular assistance to elderly, infirm parents and relatives;

– having a sense of responsibility for your family, its well-being.

7. Gender culture.

The content of upbringing activities includes:

– formation of students' ideas about the life purpose of men and women;

– about the physiological, psychological and ethical characteristics of girls, boys, men and women;

– about male and female dignity;

– about the ethical meaning of the beauty of childhood, adolescence, youth, maturity, old age;

– genuine and imaginary human beauty.

Criteria for the formation of gender culture:

– assimilation of the essence of the relationship between boys and girls, men and women;

– striving for mutual understanding and caring for each other;

– the presence of qualities that are characteristic of a boy (men): courage, skill, nobility, diligence, physical strength, masculinity, ability to overcome difficulties, willingness to help a woman, protect her, etc.;

– the presence of qualities that are characteristic of a girl (women): kindness, femininity, responsiveness, tolerance for the shortcomings of loved relatives, the ability to forgive, caring for the old, the sick, orphans, love for children, etc.

8. Healthy lifestyle culture.

The content of upbringing activities includes:

– mastering the concepts of "life" and "health" by students as universal values; educating (upbringing) them to take care of their own health and the health of others;

– formation of skills and abilities to lead a healthy lifestyle, strengthen their own reproductive health;

– understanding the importance of physical and mental work, physical culture, sports, tourism, communication with nature in personal and professional self-improvement.

Criteria for the formation of healthy lifestyle culture:

– attitude to your own health and the health of others as a value;

– having the skills and abilities to preserve and promote health, safe and responsible behavior;

– formation of hygiene skills and habits;

– physical and mental activity;

– the ability to resist destructive lifestyle and behaviors for health.

9. Aesthetic culture.

The content of upbringing activities includes:

– formation and development of aesthetic ideal, aesthetic interest, education (upbringing) taste among students and young people as the main components of aesthetic consciousness;

– formation of artistic and art history knowledge, aesthetic attitude to nature and art;

– aestheticization of the educational process, the surrounding subject environment, relationships in the student group, in the family;

– development and implementation of children's and students' artistic creative potential;

– development of the emotional sphere of the individual by artistic means;

– introduction to the world and national artistic culture.

Criteria for the formation of aesthetic culture:

– the desire to communicate with art and nature;

– the presence of an aesthetic need to transform the surrounding reality according to the laws of beauty and harmony;

– the ability to perceive art, empathize and enjoy highly artistic samples;

– the ability to give an aesthetic assessment of a work of art and an object of nature, or the surrounding reality;

– the ability of artistic and creative self-expression; aestheticization of relationships with other people;

– knowledge of the basics of folk art, historical and cultural traditions of your country, striving for their creative development and preservation.

10. Ecological (environmental) culture.

The content of upbringing activities includes:

– assimilation of leading ideological ideas and formation of value orientations of an ecological nature;

– assimilation of a system of scientific and empirical knowledge about natural processes and phenomena;

– forecasting the consequences of human and society's impact on the environment and their livelihoods.

Criteria for the formation of ecological (environmental**)** culture:

– the presence of ideas about interaction in the "man – society – nature" system, knowledge about the nature of the native land, local, regional and global environmental problems;

– participation in various activities in the field of nature management and environmental protection;

– the formation of responsibility for the preservation of the natural environment that determines the living conditions of people;

– compliance with the norms (laws) of environmentally safe behavior.

The main components of education (upbringing) are:

– civil and patriotic upbringing aimed at the formation of the student's active citizenship, patriotism, legal, political and information culture;

– ideological upbringing aimed at forming students' knowledge of the basics of the ideology of the Belarusian state, instilling in the younger generation fundamental values, ideas, beliefs that reflect the essence of the Belarusian statehood;

– moral upbringing aimed at introducing students to universal and national values;

– aesthetic upbringing aimed at the formation of the student's aesthetic taste, the development of a sense of beauty;

– upbringing of individual's culture of self-knowledge and self-regulation, aimed at the formation of the student's need for self-development and social interaction, psychological culture;

– upbringing of a healthy lifestyle culture aimed at the formation of healthy lifestyle skills in the student, awareness of the importance of health as a value; physical improvement;

– gender upbringing aimed at forming students' ideas about the role and life purpose of men and women in modern society;

– family upbringing aimed at the formation of the student's value attitude to the family and the upbringing of children;

– labor and professional upbringing aimed at students' understanding of work as a personal and social value, awareness of professional choice, social significance of professional activity;

– environmental upbringing aimed at forming a student's value attitude to nature;

– upbringing of a culture of safe life, aimed at the formation of a student's safe behavior in social and professional activities, daily life;

– upbringing of the culture of everyday life and leisure, aimed at the formation of the student's value attitude to the material environment, the ability to expediently and effectively use free time.

8.4. Methods of education (upbringing) and their essence

Pedagogical activity, like any other activity, can be organized technologically or based on intuition, pedagogical sense of proportion and tact. The technology of education (upbringing) can be considered in the

broad and narrow senses of the word. Broadly speaking, it is a system of consistent deployment of the project of pedagogical activity and communication aimed at achieving the set upbringing goals. In a narrow sense, it is a manifestation of the teacher's individual skill in the selection and implementation of optimal tools, forms and methods of pedagogical influence on the development of personality in a particular situation.

Upbringing methods are methods of professional interaction between a teacher and a student in order to solve educational and upbringing tasks. Upbringing methods in higher education are ways of joint purposeful activity of a teacher and students to solve the problems of forming a versatile personality of a future specialist.

Tools of upbringing are a broader concept than methods. The tools of upbringing include all the elements of pedagogical reality that the teacher, the organizer of upbringing, consciously uses for a purposeful upbringing process, for more fruitful interaction with students. The tools of upbringing are methodological and visual aids, the overall microclimate of the audience, the student group, the personality of the teacher, etc.

A set of methods and tools determined by the teacher's personality stipulate the **form of upbringing** activity.

In modern encyclopedias and dictionaries, the concept of "form" has several meanings: 1) the external expression of the process of upbringing; 2) a set of organizational techniques and upbringing tools that provide an external expression of upbringing activity; 3) a system of expedient organization of collective and individual activities of students. Thus, the form is an image of the interaction of students with the educator in the process of educational activity.

Forms of upbringing activity perform certain functions:

– organizational; the organization reflects a certain logic of interactions of participants of upbringing activity;

– regulating; the use of one form or another makes it possible to regulate the relationship between educators and students, in the process of which the norms of social relations are formed;

– informative; it is possible not only one-sided communication of certain knowledge to students, but also an appeal to their own experience, updating of available information.

There are a large number of classifications of forms of upbringing activity. Let's consider the features of some forms of upbringing activity, distinguished by the number of participants.

1. **Individual forms:** conversation, consultation, exchange of opinions, individual assistance in specific work, joint search for solutions to problems. *The tasks of the teacher*: to recognize the capabilities of the student, to discover his talents, to discover all the things that prevent him from showing himself.

2. **Group forms:** creative groups, self-government bodies, micro-clubs. *The task of the teacher* is to help everyone express themselves, create conditions for obtaining a tangible positive result in the group, meaningful for all its members.

3. **Collective forms:** contests, performances, concerts, propaganda teams, hikes, tours, sports competitions.

The role and place of the teacher in each of the forms of upbringing activity are different. They depend on the age characteristics of the students, the goals of upbringing. With younger students, the teacher is the leading organizer, with middle-aged students he can be an ordinary participant and act by personal example, with older students – an adviser, consultant, participant, assistant. It is important for the teacher to win over the student, to cause him to be frank, to gain trust, to awaken the desire to share his thoughts and doubts with the teacher; at the same time, it is necessary to show a democratic, respectful, tactful attitude towards the individual.

The methods that form the basis of traditional upbringing technology are persuasion, exercise, motivation (encouragement and punishment). The most common classification of upbringing methods is a system of methods reflecting the unity of the target, content and procedural components of the upbringing process (G. I. Shchukina). In accordance with this classification, *three groups of upbringing methods* are distinguished: methods of forming personality consciousness; methods of organizing activities and forming experience of social behavior; methods of stimulating behavior and activity (fig. 8.1).

Story is a consistent presentation of mostly factual material, carried out in a descriptive or narrative form. *Requirements for the story*: logic way of presentation, consistency and evidence of presentation; clarity, imagery, emotionality; consideration of age characteristics (also with regard to the duration). Influencing the feelings of students, the story helps them to understand and assimilate the meaning of the moral assessments and norms of behavior contained in it.

Explanation is a method characterized by the use of evidence confirming the truth of a given judgment.

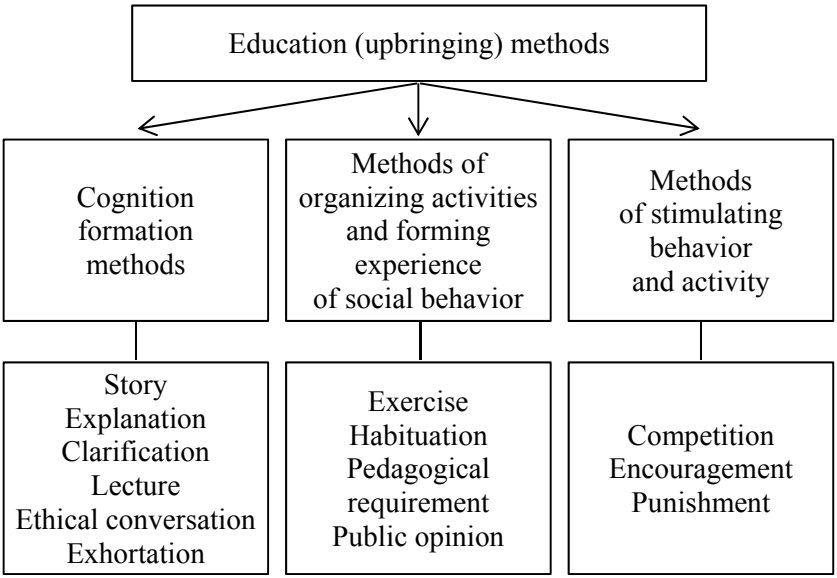


Fig. 8.1. Education (upbringing) methods

A conversation is a question-and-answer method of active interaction between a teacher and students.

The method of exercises, perceived as a multiple repetition of actions, deeds, students' experiences in order to form and consolidate their skills and habits of a behavior's culture, moral and aesthetic qualities, has been known for a long time.

The teachers understood that it was impossible to bring up a young person, relying only on the methods of explanation, advice, persuasion, he must be taught a culture of behavior or put in a situation where a certain quality should manifest itself. It is appropriate to recall the words of A. S. Makarenko: "You can't educate a courageous person if you don't put him in such conditions when he could show courage, it doesn't matter what, in restraint, in a direct open word, in patience, in courage".

Habituation reveals the greatest effectiveness at the early stages of upbringing and development of students. One of the proven means of accustoming to the given forms of behavior is the students' mode of life and activity. The stricter and more definite the regime, the better the dynamic stereotype that underlies the formation of habits is formed.

As a method of upbringing, the **pedagogical requirement** is not so widely used in higher education compared to school. However, when working with students, there are situations when students commit unseemly (inappropriate) acts. In such cases, it is appropriate to refer to the requirement method. The requirement can be presented in direct and indirect form.

Direct requirements are made in a businesslike, decisive tone – instructions, orders, they are most often concise, they show the authoritarian position of the teacher or any other organizer of upbringing. *Indirect requirements* have a more detailed form – instructions, advice, requests.

Public opinion. This is the method of activity of the student body (authorities), although teachers can rely on it. Public opinion is formed together with the development and formation of the student group (collective) and functions in it, being a method of influence of the student group on the personality of the student. Public opinion accumulates requirements, value orientations, decisions developed collectively in a particular group. For another group, they may not be significant. This method, as a rule, plays a significant role in the students' life, determining their actions, judgments. It performs evaluative, limiting and stimulating functions.

Children, adolescents and young men are highly characterized by the desire for healthy **competition**, rivalry, priority, superiority, self-affirmation. It stimulates the development of creative activity, initiative, innovative initiatives, responsibility and collectivism. The competition can be: collective and individual, long and episodic. *Principles of the competition are:* transparency, concreteness (certainty) of indicators, comparability of results, the possibility of practical use of best practices.

Encouragement is a way of expressing a public positive assessment of the behavior and activities of an individual student or a group. *Types of encouragement are:* approval, praise, awarding, granting of honorary rights, material remuneration.

Punishment is such an impact on the personality of a student, which expresses condemnation of actions and deeds that contradict the norms of social behavior, and forces students to follow them steadily. It is impossible to punish with hunger, labor, to cause physical or mental *suffering to a child (student). Means of punishment method are:* remark, censure, disapproval, reprimand, imposition of additional duties, reprimand in the order of the university, expulsion from the university. The use of punishments requires pedagogical tact from the teacher.

Punishment should be accompanied by an analysis of the causes and conditions that gave rise to this or that offense. If the student violated the rules of behavior by accident, you can limit yourself to a conversation or a simple reproach. Punishment brings success when it is consistent with the public opinion of the group. You can't punish on suspicion. Collective punishments should be avoided – they can lead to the unification (merger) of students who violate public order and discipline. Punishments should not be abused.

However, as the results of upbringing practice show, in the modern socio-cultural situation it is necessary to supplement traditional methods of upbringing with methods, techniques and means of humanistic technology. Its key links are the following components.

1. Taking into account the current needs of children (students) of different ages.

The needs of a child (pupil, student) are not divided into good and bad, they only ensure the survival of the individual and its adaptation. But there are socially acceptable and socially unacceptable ways to meet needs. The immediate "transformer" of the needs' structure is the positive emotions accompanying the successful satisfaction of these needs. The ways of implementing the needs and forming socially acceptable behavior are: the impact on the emotional and cognitive sphere of the pupil (student) (assimilation of legal knowledge, formation of moral beliefs, changing the system of values and attitudes to reality) and the activity sphere (the use of socially organized forms of activity that contribute to the formation of socially positive needs).

2. Positive perception of the child (pupil, student) by the teacher.

The meaning of a positive perception of a student is to understand and perceive his inner world, to identify, reveal and let his natural inclinations manifest, to believe in his strength and capabilities. At the same time, it is necessary to treat the shortcomings of the student as its advantages, which have not yet been used.

In this regard, it is possible to apply:

1. Psychological-therapeutic and socio-pedagogical impact with the predominance of moral means that strengthen psychophysical health.

2. The creation of a "living" situation in the upbringing process, which involves the use by the teacher of the knowledge of the student's life experience.

3. Education without coercion, mental and physical violence (violence is understood as methods of influence that force a pupil (student) to perform actions and deeds that do not correspond to his conscience, which hinders the development of the student's strength and potential, leads to a lag in physical and moral development). Nonviolence in the process of upbringing manifests itself in nonviolence over the pupil's (student's) thinking, in recognizing his rights as a full-fledged person, in giving him the opportunity to choose, express his point of view, take his place in the team, have the right to his own opinion, his way to the truth. The implementation of the idea of nonviolence includes the following *ethical techniques of communication:* not to pretend to the absolute truth; to be ready for concessions and mercy, to criticize your behavior in order to find out why your own actions cause a negative reaction from others; to learn to analyze the situation from the position of an opponent; never to identify the problem and the person; not to demand from others a complete perfection and not consider yourself as such.

Psychological and pedagogical support of students involves pedagogical and psychological assistance in the individual development and self-development of the maturing personality.

3. Upbringing situations are one of the effective methods of upbringing without coercion and violence, which embodies creativity and freedom of all participants in the process of upbringing. *Upbringing situations in educational practice have different directions:* advancing trust, creativity, free choice, emotional mood, comradely trust, etc. Their technology lies in the fact that the teacher purposefully creates these upbringing situations and involves students in them to correct behavior in the group (team).

4. Games, gaming activity – are important forms of humanistic technology. The creative principle of the personality is most fully implemented in the game and gaming activity. In their process, the child (student) learns social roles, acquires intelligence, dexterity, ingenuity, develops imagination.

The game can act as:

1) tools, method, form of activity of children and adolescents;

2) training in the formation of behavioral norms in pupils (students); skills of fulfilling rules, conditions, restrictions in actions; in making choices, etc.;

3) a condition for self-implementation and achieving higher indicators in the development of the child (student), which in the near future become his norm.

Let's name as examples some *upbringing technologies* that have become quite widespread in mass practice:

1. The humane and personal technology of Sh. A. Amonashvili (famous Soviet and Georgian teacher, scientist and practitioner) has special target orientations to promote the formation, development and upbringing of a noble person in a child by revealing his personal qualities (soul and heart, cognitive powers.). The ideal of upbringing is self-upbringing.

2. The model of labor education by A. A. Katolikov according to the system of the commune of A. S. Makarenko: children are accustomed to creative activity, undergo industrial practice according to the programs of the agricultural school. Some conceptual ideas: labor is the basis of personality formation; interest and attention to each child; the child must have a personal interest, a search, an "appetite for life", a combination of education with productive labor in the form of a school-farm; children's self-government and self-control, etc.

3. Upbringing system of the International Children's Center "Artek".

8.5. Practical class

Questions for discussion

1. The essence of the process of upbringing. The main structural elements and regularities (laws) of education (upbringing). The basic principles, tasks and functions of upbringing.
2. The pedagogical essence of the content of upbringing.
3. Methods of education (upbringing) and their essence.
4. The essence, structure and principles of the organization of the upbringing system at university. The main tasks of managing the upbringing process at university.
5. The structure of educational (upbringing) work management at university. Characteristics of the main directions and activities of the upbringing process at university. Pedagogical foundations of the curator's work in a student group.

Practical tasks

1. Compare several opinions about the power of educational influence belonging to famous people. Who do you agree with and why?

"Upbringing can do anything" (Helvetius).

"Upbringing can do a lot, but it is not unlimited".

"With the help of vaccinations, you can make a wild apple tree give garden apples, but no gardener's art can make it bring acorns" (V. G. Belinsky).

2. Investigate the following. What methods of upbringing are preferred by:

a) novice teachers;

b) teachers with a high level of pedagogical skills?

3. Diagnostics of the level of upbringing ("Methodology of moral self-assessment" by L. N. Kolmogortseva)

Situational tasks

1. During the lecture, one of the students constantly asks the teacher questions or makes inappropriate remarks. These questions are not caused by interest in the subject, but rather by the desire to be noticed in the group, to attract the teacher's attention, to demonstrate their merits. These remarks distract other students; the remarks are often unrelated to the topic of the lecture. It is impossible to stop them with answers, since another question immediately follows, only indirectly related to the topic. What should the teacher do?

2. A young teacher conducts classes for full-time students. It's the end of the day. Students attend classes well, but there are so many latecomers that it is impossible to fully start the lesson for the first 10 minutes because of the slamming door and the distracted audience. In response to comments, students refer to a difficult day, queues at the cafeteria, an unsuccessful schedule, etc. How to restore order and stop the loss of time?

3. A voluntary clean-up day was organized at university. The young teacher must organize the work of the 1st course group. The work is unequal (someone will have to do more, someone less). How should you start distributing it?

4. During the lecture, a friendly laugh suddenly appeared in the audience. The teacher is passionate about his lecture and has absolutely no idea what it is connected with. How should the teacher behave in order to restore order as soon as possible and continue the lecture?

Methodology of moral self-assessment by L. N. Kolmogortseva

Moral self-esteem is a type of self-esteem that determines the measure of self-satisfaction, reflecting the attitude.

Instruction manual. Please rate the statements below on a 4-point scale:

– 4 points – if you completely agree with the statement;

– 3 points – if you agree more than disagree;

– 2 points – if you agree a little;

– 1 point – if you do not agree at all.

Put the score next to the corresponding question number.

	1. I am often kind to my peers and adults.
	2. It is important for me to help a classmate when he is in trouble.
	3. I think it's OK to be rude (unrestrained) with some adults.
	4. There's probably nothing wrong with being rude to a person I don't like.
	5. I believe that politeness helps me feel good among people.
	6. I think I can afford to swear at an unfair remark addressed to me.
	7. If someone in the class is teased, then I tease him too.
	8. I enjoy making people happy.
	9. It seems to me that you need to be able to forgive people for their negative actions.
	10. I think it's important to understand other people, even if they're wrong.

Processing of results

From 34 to 40 points – a high level of moral self-esteem.

From 24 to 33 points – the average level of moral self-esteem.

From 16 to 23 points – moral self-esteem is below average.

From 10 to 15 points – a low level of moral self-esteem.

There are two types of moral self-esteem: *adequate* and *inadequate* moral self-esteem.

Adequate self-esteem implies a critical attitude of the individual to himself.

Inadequate self-esteem can be overestimated and underestimated.

Overestimated self-esteem manifests itself in an individual's overestimation of the level of his own morality, underestimated – in his underestimation.

TOPIC 9. PSYCHOLOGICAL AND PEDAGOGICAL FOUNDATIONS OF UNIVERSITY MANAGEMENT

9.1. The essence of pedagogical management. The main functions of educational process management.

9.2. Features of training specialists in the process of obtaining advanced higher education.

9.3. The essence of the modular rating system in the training of specialists with higher education.

9.4. Practical class.

9.1. The essence of pedagogical management. The main functions of educational process management

The socio-economic situation that emerged in our society at the beginning of the third millennium, modern scientific problems and practical tasks related to the search for new ways and means of effectively managing the national education system require a comprehensive and in-depth analysis of the existing theoretical ideas and concepts, as well as the achievements of advanced management experience gained around the world. In this context, the problem of comprehending the integral pedagogical process from the standpoint of management science, giving it a strict scientifically substantiated character, is represented.

Management is mental labor, as a result of which the management process is carried out. The management process is the continuous implementation of sequential actions from forecasting future activities, setting goals and developing ways to achieve it, to analyzing its actual result.

Management is an important and multifaceted field of activity, which both the efficiency of production and the quality of public services largely depend on. In the most general sense, management is the social management of an organization.

In world practice, management is considered as a science, art and activity for the mobilization of intellectual, material and financial resources for the effective and efficient functioning of the organization. In it we see a synthesis of two directions: commercial-economic, or

organizational-technical, and psychological-pedagogical, related to the management of people, the organization of the team to achieve the goal.

The purpose of management is to formulate and apply universal management principles in any organization and sphere of human activity, which include: defining management goals and objectives; developing specific measures to achieve them; dividing tasks into separate types of operations, distributing work; coordinating the interaction of various departments within the organization; improving the formal hierarchical structure, optimizing decision-making processes and communications; search for adequate motivation for activities, etc. From a functional perspective, it acts as a process of planning, motivation and control, which are necessary for the formation and achievement of goals.

A distinctive feature of management is the orientation of the organization to meet the needs of the market, to constantly improve production efficiency (obtaining optimal results at the lowest cost), to freedom of decision-making, the development of strategic goals and programs, their constant adjustment depending on the state of the market. At the same time, it is also necessary to take into account the specifics of the activities within which management is carried out.

The subject of pedagogical activity is the organization of students' educational activities aimed at mastering their subject socio-cultural experience as the basis and conditions for development. The content of pedagogical activity makes it possible to distinguish such a type of management as pedagogical.

Pedagogical management can be considered as a special branch of management, which has its own specifics and patterns inherent only to it. The specific nature of pedagogical management consists in the exclusiveness of the subject, products, tools and the result of the work of the educational process manager. The subject of the work of the educational process manager is the activity of the subject of management, the product of labor is information about the educational process. The instrument of labor is the word, speech. The result of work is the level of literacy (training), upbringing and development of the object of pedagogical management – students.

Pedagogical management is understood by researchers as:

– a teacher's managerial activity carried out in the classroom and aimed at achieving the goals of personal development of a child ready for life in new socio-pedagogical conditions;

– theory, methodology and technology of effective management of the educational process, ... the ability of a leader to achieve goals using labor, intelligence and motives of behavior of other people, ... a fusion of science and art of managing people and social processes;

– a set of principles, methods, organizational norms and technological techniques for managing the educational process aimed at improving its effectiveness.

The educational process is a purposeful teacher's activity to educate, bring up and develop the personality of students, ensuring that the latter assimilate social experience, values of human civilization and culture. A teacher of a higher educational institution is, in fact, a manager of the educational process (as a subject of its management).

Thus, pedagogical management can be defined as a non-standard type of a teacher's managerial activity in a team of students, aimed at organizing the educational process, managing educational information, organizing educational work and supporting the communication process for the formation of students' educational and cognitive activity, which ensures the development of personality and preparation of students for life in new social conditions.

A. Fayol in the XX century for the first time identified the functions of management – planning, organization, coordination, management and control. Over time, the range of managerial functions performed has been supplemented, expanded and clarified.

When comparing pedagogical and managerial activities, it is possible to identify the coincidence of functions: motivational, constructive, organizational, informational, control and decision-making. When analyzing the actions that are required to implement management from the point of view of changing the teacher's role, it can be stated that the integration of managerial and pedagogical activities is expedient.

The content of the teacher's managerial activity as a subject of pedagogical management is reflected in the functions performed by him. Taking as a basis the general functions of management, P. I. Tretyakov identified *the main functions of the manager of the educational process*:

– *information and analytical* – performing self-analysis of personal management activities; analysis of information on the state and development of the educational process, the level of students' education;

– *motivational-target* – making the choice of the activity's goal, identification of strategic and tactical tasks; motivation of teachers

and students to achieve the goal; transformation of motives into motives-goals;

– *planning and prognostic* – creating programs to achieve the goal; integrated target planning;

– *organizational and executive* – carrying out the formation and regulation of a certain structure of organized interactions for the expedient achievement of the goal;

– *control and diagnostic* – fixing the compliance of the functioning and development of the system of educational work on the basis of compliance with national requirements, standards;

– *regulatory-correctional* – making correction by operational methods, means and influences in the process of managing the pedagogical system in order to stabilize it at the planned level.

Modern education no longer needs a teacher who is used to acting in accordance with the instructions and is not capable of independent decision-making. Society needs a teacher as an organizer of the educational process, a person who can contribute to the process of solving urgent problems that arise in the life of a student.

The theory of pedagogical management opens up a number of *opportunities for teachers to organize and implement the educational process*:

1. *Transition from the command and administrative management system to the system of professional cooperation, which is based on joint activity, assistance, cooperation, co-creation; reflexive and analytical approach to the process and the result of activity.*

As a result of partnerships, the atmosphere in the classroom changes. A characteristic feature of the class sessions is the humanization of relations between the subjects of educational interaction, the manifestation of empathy, taking into account the individual characteristics of the trainees, the special creation of situations that promote self-implementation, the dominance of encouragement and praise.

The student is free in his activities, free in decision-making, has the opportunity to proceed from his own motives, rely on his own experience. The goal of the teacher as a manager is not to impose his decision on the student, but to increase his self-esteem and strengthen self-confidence, motivate cognitive activity.

2. *Creating an emotionally comfortable climate.* For many students, especially those who are just starting to study at a university, a trusting

contact with a teacher who is able to interest them in their subject and give useful advice, direct and coordinate activities is necessary. The main role is played by the professional competence of the teacher. It assumes not only the availability of the necessary amount of knowledge and experience, but also the ability to use them at the right time in the process of pedagogical activity. The teacher needs to take into account the psychology of the audience, the patterns of perception, attention, thinking, and emotional processes of students.

3. *Providing opportunities for the development of each student's personality (opportunities for effective personal self-knowledge, self-development, including the development of personal and professionally significant qualities).*

4. *Coordination of motivational orientation of managers and teachers who create conditions for a developing person and developing higher education institution.*

A teacher who implements the management function must possess fundamental subject knowledge, communicative skills, experience sufficient to achieve the goals of professional activity, as well as be ready to constantly improve their business and personal qualities, socio-moral position and the ability to adapt quickly to changing conditions of professional activity. Thanks to pedagogical management, the teacher develops the ability to manage pedagogical situations, the process of socialization, the educational and cognitive process and the behavior of students in a motivated manner, which is an important component of a modern teacher's activity.

Thus, a manager in education is not only a specialist who professionally performs management functions, but also a professional who takes into account the specifics of the school as a system where everyone manages at their own level and is a subject of management, has a certain orientation – professionally works with people. The area of manager's professional activity is to ensure the rational management of the education system, the organization of management systems in the development mode, the improvement of management in accordance with the trends of socio-economic development.

9.2. Features of training specialists in the process of obtaining advanced higher education

The higher education system in the Republic of Belarus represents the most important innovative potential for the development of the economy and increasing its competitiveness in the world.

Modern higher education includes the following types (Article 198 of the Code of the Republic of Belarus on Education):

– general higher education;

– advanced higher education in the implementation of the master's degree program;

– special higher education.

Advanced higher education gives the right to master the content of the educational program of postgraduate studies (adjunct studies) at the level of science-oriented education and employment in the received specialty and awarded the degree of "Master".

The modernization of higher education in the Republic of Belarus emphasizes the problem of quality. The advanced higher education should provide a qualitatively new level of training of scientific and pedagogical personnel to work in institutions of higher, secondary special education and specialized classes of secondary schools, as well as in public administration bodies capable of research activities, solving complex professional tasks, and making appropriate managerial decisions. Solving such a problem requires a comprehensive, scientifically based approach. In our opinion, the quality of obtaining advanced higher education will be facilitated by the presence of a conceptually elaborated didactic model, taking into account the peculiarities of each type of education and the development of quality management systems adequate to them.

The analysis of modern works on quality management shows that the problem of quality in education cannot be considered in isolation from the fundamental ideas about the essence of social functioning and human development. However, in our opinion, in the discussion of quality management issues, in some cases, this gap as well as the lack of consideration of the specifics of each educational stage are noted.

Let us dwell on the peculiarities of training specialists who obtain advanced higher education, which usually covers young people aged 20 to 30 years. This age is characterized by the desire for independence, independent life, awareness of their adulthood and full rights. A person is

actively involved in all types of social activity and masters various social roles. He is ready to take responsibility for his own life and make an adequate choice of life decisions. This age is sensitive in relation to self-knowledge in various professional situations, to overcome life's difficulties. The analysis of numerous approaches to the definition of an adult shows that such characteristics unambiguously make it possible to classify an individual as an adult, and advanced higher education as an adult education. The concept of an adult person implies the idea of constant self-development, self-affirmation and self-implementation of a particular individual, which, of course, takes place not only in a given age period, but also throughout life. The identification of a high level of self-awareness as the main criterion of adulthood can be considered as the starting point of designing training in the process of obtaining advanced higher education.

In the conditions of a transforming society, ensuring the quality of processes and results of obtaining advanced higher education is impossible by means of the traditional learning process.

However, today there is a tendency to mechanically transfer the content of education, forms of organization, didactic means used in the process of obtaining general higher education to the process of obtaining in-depth higher education. It is possible to fix a number of *contradictions in the traditional learning process*, the solution of which would make it possible to fundamentally change the quality of second-stage education as an adult education field:

– the value of this process continues to be impersonal knowledge, skills and abilities, and not the development and self-development of the individual, self-educational, research activities demanded by the current situation;

– the educational process is aimed at preparing a specialist to perform a regulated set of professional functions, and not at educating a professional capable of responding flexibly to changes in the situation in the activity and "completing" his image through self-educational activities;

– the content of education is defined only as a set of educational material to be mastered, it lacks activity (ways of thinking and activity) and personal (value-semantic structures) components, without which it is impossible to include a person in a continuous self-educational process;

– the "enlightenment" model of education based on the transmission and reproduction of information remains predominant, while the conditions of a transforming society require an education model that "triggers" the

processes of self-organization, self-development, self-education, ensuring the adaptation of the individual in society;

– the learning process is either not technologized, or is based on subject-oriented, algorithmic technologies, while it is possible to ensure the subjectivity of an adult in education through its inclusion in reflexive activity processes using stochastic[1] technologies.

The learning process itself in the course of obtaining advanced higher education, considered as a model of adult education, *will be able to ensure the self-implementation of the individual in a transforming society and meet the needs of society and the state in a professional* who flexibly responds to changes in the professional sphere, *if it* (*the process*):

1. Is based on the ideas of philosophical, psychological, social anthropology about man as a self-developing system, about the unity of activity, community and consciousness, about the parity of interests of the individual and society.

2. Is built on the basis of a set of approaches, including competence-based and activity-based approaches.

A competence-based approach will ensure the focus of the process on the acquisition by an adult of a variety of competencies that are in demand by society and are a means of self-actualization of the individual. The use of a competence-based approach will lead to the creation of a developing educational environment that provides conditions for the implementation of the individual's needs and development of the individual's abilities, initiating the self-educational activity of the student and providing him with the necessary means for this.

An activity-based approach will determine the selection of the thought-activity content of education and ensure the subjective position of students in the educational process, their activity in using the possibilities of the educational environment;

3. Is implemented on the basis of stochastic technologies that provide a change in personality as a result of activities in an activating educational environment, assume a variety of individual educational trajectories in the movement towards the goal, give preference to problematic and model methods, increase the responsibility of the subject (adult) for the results of education.

[1] Stochastic from Greek στόχος (stókhos) "aim, guess") refers to the property of being well described by a random probability distribution. Stochasticity refers to a modeling approach.

9.3. The essence of the modular rating system in the training of specialists with higher education

The modular-rating system for organizing the educational process is a set of organizational measures that control the process of mastering the main educational program of higher and secondary vocational education, in which the content of each academic discipline is structured into disciplinary modules and the knowledge and skills of students are regularly assessed throughout the semester.

Large-scale promotion of module-rating technology to the educational market is hindered due to the complexity of organizing and conducting control, the lack of clear criteria for assessing students' knowledge and a unified approach to the control procedure, the unpreparedness of teachers for innovative activities, etc. At the same time, teaching staff are required to solve a whole a set of tasks related to the development of regulatory documents, full-fledged educational and methodological materials and adaptive software, quantitative and qualitative indicators of control, etc.

In modular training, everything is pre-programmed: not only the sequence of studying the educational material, but also the level of its assimilation and quality control of assimilation. Modular training involves rigid structuring of educational information, the content of training and the organization of students' work with full, logically completed training blocks (modules). The module coincides with the topic of the academic subject. However, unlike the topic in the module, everything is measured and evaluated: assignment, work, attendance, starting, intermediate and final level of students. The module clearly defines the learning objectives, tasks and levels of study of this module, skills and abilities are named. Modular learning is very close in its ideas and organizational forms to programmed learning. Training modules and tests can be easily transferred to a computer learning environment.

The training course usually includes at least three modules. At the same time, a theoretical block, practical work, and final projects can be a separate module.

When developing a module, it is taken into account that each module should give a completely specific independent portion of knowledge, form the necessary skills. After studying each module, students receive recommendations from the teacher on their future work. By the number

of points scored by students from the possible ones, the student himself can judge the degree of his knowledge.

In modular training, the rating assessment of students' knowledge and skills is most often used.

To implement a progressive rating system, it is necessary to conduct a didactic analysis of the structure and content of the academic discipline, breaking it down into separate modules; to design a test space on a block-modular principle; to develop a technology for automated control; to have an organizational component and rating regulations, as well as an instrumental expert-training system. At the same time, it is necessary to ensure that the following *basic requirements* are met:

1) a comprehensive and systematic approach to the organization and functioning of the rating system for knowledge control;

2) structural integrity of the modular rating system and its individual elements;

3) the unity of forms, methods and ways of presenting information;

4) openness and accessibility, information reliability, validity, completeness, content, economy and visibility;

5) registration, storage, updating of materials;

6) work in local and global networks;

7) high technological efficiency and continuity of pedagogical control.

The disciplines of the curriculum have the status of "compulsory (mandatory)" and "optional". The list of compulsory disciplines and their minimum volumes in credit units are determined by educational standards. Educational standards may also contain a recommended list of optional disciplines related to the cycles of natural science and general professional training. The final list of optional disciplines included in the main educational program of the university in the specialty is formed at university and approved by the academic council. The section of the main curriculum "Disciplines of profilization", which have the status of special optional disciplines, is formed taking into account the opinion of employers, the traditions of the university and the characteristics of the regional labor market. The list of disciplines of profilization and their content can be constantly developed and updated, taking into account the latest achievements in the relevant fields of science and technology.

When forming an individual curriculum, a student can choose disciplines from the entire list of disciplines of profilization, taking into account his own ideas about the need to obtain certain special knowledge

and additional certificates to the diploma for the most successful self-implementation in the labor market after graduation. For its part, the University can annually revise and develop the list of specializations offered to students for inclusion in individual curricula of disciplines.

In the main curriculum, it is advisable to single out among the compulsory disciplines the disciplines that are most important for the formation of the professional competence of a future specialist. For such professionally important disciplines, the minimum threshold value of the assessment based on the results of their study is set (for example, in American universities it must be at least 74 points). If a student receives a lower grade, credit units in this discipline are not credited to him, and he must study it again. In order for credits in ordinary disciplines to be credited, it is enough for a student to score only 61 points.

The formation of individual curricula by students makes it possible to satisfy the specific needs of the labor market and individual potential employers, in agreement with which, and increasingly with their financial participation, students are given the opportunity to receive a second higher education simultaneously with the main one – the so-called double concentration training. Obtaining a second specialty is the leading form of concentration of educational goals of professional training and, depending on the degree of its proximity to the main one, may require an increase in the period of study by 1–2 years.

Thus, under the conditions of an individually oriented organization of the educational process, universities and students have new effective opportunities for improving their educational programs, adapting them to the individual needs of students, employers, and the labor market, taking into account the requirements of international approaches to education.

9.4. Practical class

Questions for discussion

1. The essence of pedagogical management. The main functions of educational process management.
2. The concept of quality of education. The problem of education quality management.
3. The concept of pedagogical diagnostics (monitoring). The main types and functions of pedagogical monitoring.

4. Basic requirements for the organization of pedagogical control. Characteristics of the main types of pedagogical control.

5. Rating system for assessing students' knowledge and skills.

Practical tasks

1. Prepare a presentation of students' performance evaluation criteria.

2. Investigate cases, situations when the assessment stimulates the student's interest, creative attitude to the subject being studied, and when, on the contrary, reduces his interest in the subject. Based on the analysis performed, develop recommendations.

3. Develop a list of forms and methods for monitoring and evaluating students' academic achievements within one discipline (according to the profile of your specialty).

4. Analyze the features of the test control, its advantages and disadvantages. Present the results in the form of a table.

Situational tasks

1. There is an employee in your team who is listed rather than working. He is satisfied with the situation, but you are not. What would you do?

2. The student was late for the test. The teacher gives him an individual task. The student submits the test ahead of schedule. The teacher claims that the student cheated and gives another, more difficult task. The student completes it just as quickly. The teacher gives the third task, which the student cannot cope with. The student asks for help in solving, but the teacher also can not cope with this task. The situation turns into a conflict: the student spoke sharply to the teacher and left the classroom. Analyze the situation.

3. When checking the written home assignment, the teacher found two absolutely identical correct papers with an original non-standard solution. How should a teacher behave in such a situation?

4. You have discovered that a student is using Internet resources while doing a written test. The student reacts violently to your remark, proving that now it is much more important for a specialist to have the ability to find the necessary information, and not memorize it. What would you do in such a situation?

TOPIC 10. INTRODUCTION TO THE PSYCHOLOGY OF HIGHER EDUCATION

10.1. The subject of the psychology of higher education and its place in the system of psychological science.

10.2. The main tasks and problems of the psychology of higher education.

10.3. Methods of scientific and psychological research in the psychology of higher education.

10.4. Practical class.

10.1. The subject of the psychology of higher education and its place in the system of psychological science

The psychology of higher education (higher school psychology) is a relatively new branch of psychological science. The beginning of its origin can be considered the end of the first third of the XIX century. It was in the XIX century that the so-called classical university was formed, the fundamental foundations of which were laid in Germany at the end of the XVIII century by the famous scientist and politician Wilhelm von Humboldt. The model of a classical university, in which research and educational activities were combined, received a real embodiment at the University of Berlin, opened in 1810. Its first rector was V. von Humboldt. This university, together with the German Academy of Sciences, gave a powerful impetus to the development of science by bringing together scientists who head scientific schools and laboratories. The active development of university research laboratories had a lot of positive consequences, among them: improving the quality of education, strengthening the applied focus of scientific research, etc., the need to combine science with higher education led the higher school psychology in the late XIX-early XX centuries to analyze, search and study options for convergence in the educational process of cognitive and educational activities.

Systematic research of psychological and pedagogical problems of higher education in the USSR began in the 50–60 years of the XX century. A significant contribution to its development during this period was made by the works of S. I. Arkhangelsky and S. I. Zinoviev, in which the educational process in higher school was fundamentally

analyzed and the foundations for solving problems that stand in the way of updating higher school were laid.

Due to the need to improve the psychological and pedagogical culture of university teachers in the 70s of the twentieth century, an integrative course of pedagogy and psychology of higher school was introduced mandatory for all postgraduate students. The first curricula of the higher school psychology course were developed, and in 1981 a textbook was published in Minsk, the authors of which were M. I. Dyachenko and L. A. Kandybovich.

Scientific interest in the issues related to the psychological aspects of highly qualified specialists' training is due to the need to develop the ability of future specialists to perform effective professional activities in a globalized information society. The development of high-tech industries, the dynamic renewal of knowledge, information, and technology taking place in all spheres has led to the fact that it is impossible to teach anything for life even at the best university. A qualified specialist must have the ability and skills of self-education, be ready for life-long education and advanced training. Moreover, research conducted at the intersection of various sciences has come to the fore, which requires a specialist to have good fundamental training and the ability to quickly master new technologies, as well as work in a team.

The expansion of the human information space, the spread of information technologies require a transition from predominantly informational forms to active methods and forms of teaching with the inclusion of elements of problemativeness, scientific search, with extensive use of the reserves of students' independent work. In this regard, the requirements for the teachers' professionalism, the importance of pedagogy and psychology in the training and advanced training of university teaching staff are also increasing. Criteria for evaluating the effectiveness of both teachers and universities are being developed.

The psychology of higher education (higher school psychology) as a branch of psychological knowledge is closely related to other branches of psychology. *General psychology*, which studies the general laws of the functioning and development of the psyche, develops methodological foundations, theories and methods for studying psychological phenomena, is a fundamental branch whose research results are used by other branches of psychology, including higher school psychology.

The relation of higher school psychology with *age psychology* is due to the need to take into account the age characteristics of students.

The close relation with *pedagogical psychology*, which studies the psychological features and patterns of a person's mental development in the process of his training and upbringing, the psychological foundations of a teacher's activity and personality, is determined by the solution of the tasks of managing students' educational activities, providing conditions for their effective training, upbringing and development.

Social psychology is a branch of psychology that studies the patterns of behavior and activity of people caused by the fact of combining them into social groups, which makes it possible to analyze relationships in a student group, determine the stages of its development, and provide conditions for improving the effectiveness of pedagogical communication. Socio-psychological phenomena play an important role in the life of the university, in solving the problems of students' upbringing and training, in the work of departments and public organizations.

Psychodiagnostics is a field of research related to the quantitative assessment and accurate qualitative analysis of a person's mental properties and states using scientifically based methods and techniques, which allows higher school psychology to solve the problems of psychological assessment of the students' level of development and their differentiation.

Acmeology is a branch of psychological science that studies the phenomenology, patterns and mechanisms of human development during adulthood, in particular, the achievement of a high level of professional skill. Since part of this period falls on the student years, then acmeology as a scientific discipline helps to solve the problems of improving the educational process in higher education.

Thus, the psychology of higher education (higher school psychology) is a relatively young and intensively developing branch of psychological science, the *object of which is the psyche (functioning, change, development) and psychological characteristics of the subjects of the educational process of the university.*

The subject of science is the side or property of the object that needs to be investigated. Consequently, the object of science is a broader concept than the subject, since the same object can relate to several sciences at once. For example, a student or teacher as a person can be an object for study from the standpoint of pedagogy, medical sciences, anthropology, etc. The subject of science, as a rule, is inherent only in this particular science and no other. The subject of the psychology of higher education (higher school psychology) is the psychological patterns

and conditions of the effectiveness of the processes of education and upbringing in higher education (school).

Higher school psychology studies the patterns of individual, as well as socio-psychological phenomena generated by the conditions of universities, the place of these phenomena, their role, manifestation, development and functioning in the activities of students, teachers and heads of universities, as well as ways to influence them in order to more effectively solve the problems of higher education. Unlike general psychology, which studies general patterns, the essence of people's mental life, higher school psychology is primarily interested in the functioning, formation and development of the student's psyche, psychological characteristics of the teacher's personality and activity.

Thus, the subject of higher school psychology can be considered in some sense interdisciplinary, synthesizing to a certain extent the achievements of pedagogical, social, age psychology, labor psychology, etc.

10.2. The main tasks and problems of the psychology of higher education

The development of the psychology of higher education (higher school psychology) as a science has led to the creation of relatively independent branches of knowledge within it, focused on individual problems: psychology of the student's personality, psychology of education, psychology of upbringing, as well as psychology of personality and activity of a higher school teacher.

Psychology of the student's personality studies the general and specific features of the student's personality (mental processes, mental states, etc.). Psychology of learning explores the features and patterns of assimilation of general and professional knowledge, the formation of skills and abilities; studies the mechanisms of influence of educational activities on the student's intellectual and personal development. The higher school psychology focuses on the peculiarities of personality's development in the conditions of purposeful organization of student's and student team's activities, the formation of professionally significant qualities of a future specialist with higher education; on finding ways to optimize the adaptation of first-year students to the peculiarities of studying at a university, and graduate students to work. *Psychology of a high school teacher's personality and activity* explores the psychological

aspects of professional pedagogical activity and communication, as well as those personality traits that contribute to or hinder their successful implementation, analyzes the problems of the development of pedagogical abilities, professional identity, the formation of a teacher's professionalism, as well as the causes of personal deformations that arise in teachers.

The main tasks of higher school psychology are the following:

– psychological substantiation of the professiogram of a modern specialist with higher education (engineer, architect, economist, manager, teacher, doctor, lawyer, etc.), on the basis of which an educational standard should be developed in the areas and specialties of professional training;

– identification of patterns of personality formation and professionally important qualities of a future specialist with higher education (taking into account the profile of the university, age and social characteristics);

– conducting a psychological analysis of the activities of students, teachers, university managers in order to improve the effectiveness of the educational process;

– study of the student team, its development and influence on the educational, social, scientific and industrial activities of students;

– study of the problem of professional guidance and professional selection in higher educational institutions;

– analysis of the process of first-year students' adaptation to the conditions of study at university, and graduate students to the conditions of labor activity;

– the study of the psychological characteristics of the personality and pedagogical activity of a university teacher, the psychological foundations of his pedagogical skills and creativity;

– psychological analysis of communication between teachers and students, the conditions for its effectiveness.

In practical terms, the *psychology of higher education* (*higher school psychology*) correlates the tasks and process of forming a student's personality with the content of education, assists teachers in finding means of intensifying the educational process, optimal methods of teaching and upbringing students, and in resolving issues of the scientific organization of the work of students and teachers.

10.3. Methods of scientific and psychological research in the psychology of higher education

The methodological arsenal of the psychology of higher education includes almost the entire set of methods, procedures and private methods of research, examination or psychological impact, which are used in all branches of psychological science.

Methods of scientific research are those techniques and means by which scientists obtain reliable information, which are then used to build scientific theories and develop practical recommendations. Any method is implemented in a specific methodology, which is a set of rules for a specific study, describes a set of tools and objects used in specific circumstances, and also regulates the sequence of actions of the researcher. In psychology, a specific methodology also takes into account the gender, age, professional affiliation and other characteristics of the subject.

The methods used in psychological scientific research can be classified on different grounds (criteria), which in turn facilitates the search or development of a methodology that best corresponds to the purpose and objectives of the study. The classification proposed by B. G. Ananyev is the most widespread in psychology in general and higher school psychology in particular. He identified *four groups of methods*:

1) organizational;
2) empirical;
3) data processing methods;
4) interpretative.

1. The group of **organizational methods** includes comparative, longitudinal and complex methods. *The comparative research method* involves comparing the studied objects according to certain characteristics and indicators. *The longitudinal method* provides for multiple examinations of the same people for a long time, allowing not only to identify certain features, but also to trace the dynamics of the development of the studied properties. *The complex method* involves, on the one hand, a combination of several strategies for organizing research, on the other hand, consideration of the object from the standpoint of various sciences or different points of view. The involvement of specialists from different scientific fields makes it possible to establish relationships and dependencies between phenomena, for example, between the physiological, psychological and social parameters of a person.

2. **Empirical methods** are used to collect psychological and pedagogical facts. This group includes observational methods (observation and self-observation), experiment (laboratory, field, natural, etc.), psychodiagnostic method, analysis of processes and products of activity (praxiometric methods), modeling and biographical method. Let's focus on a more detailed description of the methods most often used by higher school psychology.

The observation method is one of the most common. Observation is the purposeful, organized perception and registration of an object. The object of observation is the actions and deeds of students and teachers. With the help of observation, one can study feelings, volitional, moral and other qualities of a person.

When planning an observation, the researcher must determine its purpose, select the groups to be monitored. These groups must belong to one category, must have properties that distinguish them from those groups that belong to another category.

Each group should include individuals with homogeneous behavior. It is also necessary to choose the type of observation and decide when and for how long to observe, what will be the method of recording observation data. Quite often, the observation is carried out not by one, but by several observers, whose results are compared. Observation as a research method is often used at the first stages of scientific development of the problem, and its results are at the same time the source material for subsequent psychological analysis.

Observation has a number of drawbacks. In the process of observation, distortion of facts is possible, and the more the observer strives to confirm his hypothesis, the greater it is. Typical observation drawbacks are the following:

– *first impression mistake* (*error*) – the first impression of an individual determines the perception and assessment of his further behavior;

– *gallo effect* – generalized observer's impression leads to ignoring subtle differences in behavior;

– *the effect of condescension* – the tendency to always give a positive assessment of what is happening;

– *the central tendency mistake* (*error*) – the observer tends to give an average assessment of the observed behavior;

– *correlation mistake* (*error*) – evaluation of one feature of behavior is given on the basis of another feature observed;

– *contrast mistake* (*error*) – the tendency of the observer to distinguish features in the subjects that are opposite to their own.

However, observation is an indispensable method if it is necessary to investigate natural behavior without outside intervention in the situation, when you need to get a holistic picture of what is happening.

The method of *experiment* provides the data necessary for both the description and explanation of mental phenomena. An experiment is a method of psychological research in which a situation is purposefully created in which the studied property is distinguished, manifested and evaluated in the best way.

The main advantage of the experiment is that it allows more reliably than all other methods to draw conclusions about the cause-effect relationships of the phenomenon under study with other phenomena, to scientifically explain the origin of the phenomenon and its development. *Laboratory experiment* is carried out in specially created conditions, usually with the use of instruments, equipment and other technical means. *A natural experiment* takes place in ordinary living conditions, at a lecture, seminar, exam, etc. The results of the laboratory experiment win in accuracy, but are inferior in the degree of naturalness – compliance with the real behavior of the subject. The experiment allows the researcher to manipulate one or more variables, which allows a fairly clear interpretation of the results. In addition, this is almost complete control over the research situation, the experiment can be repeated many times.

The application of the experiment requires the researcher to comply with the following *requirements*: the choice of independent variables, the determination of the values of independent variables, the choice of the method of measuring the responses and reactions of the subject, monitoring the progress of the experiment, elimination of interference, the choice of the method of mathematical processing of the results, etc. It also implies systematic control of all factors that differ from the manipulated variables, but which can influence the phenomenon.

However, it must be remembered that the results of laboratory experiments are always results obtained under artificial conditions and cannot be transferred to natural situations. Therefore, it is necessary to study carefully the possibility of generalizing the results obtained in laboratory artificial situations, although it should be noted that the artificiality of the collected results depends on the research strategy used.

Within the framework of the experimental method, there are three main *research strategies*:

1) *field experiments* involve the systematic study of relevant quantities, as well as the direct manipulation of one or more quantities. The field method requires collaboration with official institutions;

2) *a laboratory experiment* is a strategy that helps the researcher to have maximum control over the conditions in which behavior is observed;

3) *sample surveys* (*research*) *and evaluation tasks* – both of these strategies study the reports that subjects present about themselves, their faith, their opinion, etc., in other words, behavior is investigated that is an answer to the researcher's questions, and not a reaction to a specific context. The difference between a sample survey (research) and an evaluation task is that sample research usually uses procedures for presenting stimuli and conditions familiar to the subjects, while evaluation tasks use complex stimuli and unfamiliar contexts. However, it is assumed that the context, maintained as neutral as possible, unlike the laboratory experiment, does not affect behavior.

Conversation complements observation and experiment. This is a research method specific to psychology, since in other natural sciences communication between the subject and the object of research is impossible. A dialogue between two people, during which one person reveals the psychological characteristics of the other, is called a conversation method. The conversation is included as an additional method in the structure of the experiment at the first stage, when the researcher collects primary information about the subject, gives him instructions, motivates him, etc., and at the last stage, taking into account data obtained using other methods, for example, observation, experiment or questionnaire. The condition for success is trust in the researcher, the creation of a favorable psychological atmosphere, etc. Additional information is provided by the external behavior of the subject, the intonation of his speech. The conversation requires serious preparation of the researcher, as it is used in the process of direct contact with the subject in the process of communication.

Survey methods are used in the study of opinions, students' attitudes to various events. The survey can be oral and written. Oral questioning is used in cases where it is desirable to monitor the behavior and reactions of the person answering the questions. This type of survey requires special training, and, as a rule, a lot of time spent on conducting research.

Interviewing is a type of survey in which the researcher adheres to pre-planned questions asked in a certain sequence. According to the goals, this method is divided into an opinion interview – clarifying people's attitudes to a particular phenomenon and a documentary interview – clarifying facts, events and phenomena.

A *written survey*, unlike an oral one, allows you to reach a larger number of people. The most common form is the questionnaire. But its disadvantage is that, using the questionnaire, it is impossible to take into account the reaction of the respondent to the content of its questions in advance and, based on this, change them. Questionnaires are personal, anonymous, closed, open and semi-closed. In open questionnaires, the nature and number of responses, their type and form are not provided in advance. Closed questionnaires provide for the choice of one or more answers only in the proposed formulations. In the semi-closed ones, the respondent is offered certain forms of answers and is given the opportunity to express his point of view. The indisputable advantage of the questionnaire method is the rapid acquisition of a large array of data, the disadvantage is that it, as a rule, reveals only the top layer of factors: the materials of questionnaires and questionnaires made up of direct questions to the subjects cannot give the researcher an idea of many patterns and causal dependencies related to psychology; it is also possible to obtain unreliable data. To compensate for the shortcomings of survey methods, they are used in combination with more meaningful research methods, as well as repeated studies are carried out, the real goals of surveys are disguised from the subjects, etc.

Analysis of processes and products of activity (praxiometric methods) involves the use of various products of the subjects' creativity as an object of study (poems, drawings, essays, lecture notes, essays, abstracts and other texts, objects as a result of a certain type of labor activity, etc.). A variation of the method is the technique of content analysis. *Content analysis* is one of the most developed and rigorous document analysis methods. The researcher identifies units of content, for example, when analyzing a text: a word (term, symbol); judgment or complete thought; subject; character; author; complete message.

Testing is a specialized method of psychodiagnostic examination, using which it is possible to obtain an accurate qualitative or quantitative characteristic of the phenomenon being studied. Tests differ from other research methods in that they assume a clear procedure for collecting and

processing primary data, as well as the originality of their subsequent interpretation. The purpose of testing is to diagnose certain psychological characteristics of a person, and its result is a quantitative indicator correlated with previously established relevant norms and standards. These results have no prognostic value and cannot serve as a basis for taking certain psychological and pedagogical measures. Qualified diagnostic examination requires special (psychological) training from the researcher, possession of not only the material and instructions of the test methodology used, but also methods of scientific analysis of the data obtained.

The essence of the *biographical method* is to study the features of the life path of one person or group of people, in combination with the method of analyzing the products of activity it makes possible to draw conclusions about the formation of mental processes, properties in the process of activity.

3. The group of **interpretive methods** is primarily an explanatory principle that determines the direction of interpretation of research results. In scientific practice, *genetic* (aimed at identifying the relationship of the studied phenomena over time), *structural* (focused on identifying, describing the structure of objects (phenomena) and presenting the results in the form of various models), *functional* (aimed at the connections of the studied object with the environment), *complex* (considers the object of study as a set of components to be studied with using an appropriate set of methods) and *system* (methodological direction in the study of reality, considering any fragment of it as a system) approaches.

Methods of scientific and psychological research are a system of interrelated and interdependent elements. To ensure the most objective results, a high degree of reliability, the researcher must apply various strategies, methods and techniques.

10.4. Practical class

Questions for discussion

1. The subject, tasks and main categories of the psychology of higher education. The main directions of the development of the psychology of higher education.

2. Prerequisites for the emergence of higher school psychology. Psychology of higher school in the system of psychological and related disciplines.

3. Methods of scientific and psychological research in the psychology of higher education and their specifics.

4. Characteristics of the teacher's personality as a subject of the educational process of the university. Pedagogical abilities.

5. Professional self-consciousness (self-awareness) of the teacher. Crises of professional formation in the teacher's activity.

Practical tasks

1. Write down from different sources and carry out a comparative analysis of the definitions of the main categories of higher school psychology.

2. Make a list of the qualification characteristics of the teaching staff of the institution of higher education.

3. From the psychological and pedagogical literature, highlight the most important personal qualities that are necessary for the effective activity of a higher school teacher.

4. Prepare an essay on one of the topics of your choice: "My favorite teacher", "My ideal of a high school teacher", "The profile of a modern teacher", etc. Describe those characteristics of the teacher's personality that reflect his socio-moral, professional-pedagogical and cognitive orientation.

5. Diagnostics of the implementation of the teacher's needs in self-development (N. P. Fetiskin).

Diagnostics of the implementation of the teacher's needs in self-development (N. P. Fetiskin)

Instruction. A number of indicators are presented to your attention. Rate yourself on a 9-point scale for each indicator. Point 1 is the minimum severity of the indicator, point 9 is the maximum. Put a cross in the box of the score chosen for the answer. Thank you for your work!

	1	2	3	4	5	6	7	8	9
1. Awareness of the personal importance of long- life education in pedagogical activity									
2. The presence of cognitive interests in the field of pedagogy and psychology									
3. Sense of duty and responsibility									

	1	2	3	4	5	6	7	8	9
4. Curiosity									
5. The desire to get a high assessment of their self-educational activities									
6. The need for psychological and pedagogical self-education									
7. The need for self-cognition (self-knowledge)									
8. The rank place of self-education among other activities									
9. Self-confidence									
10. The level of general education knowledge									
11. The level of general education skills									
12. The level of pedagogical knowledge									
13. The level of psychological knowledge and skills									
14. The level of methodological knowledge and skills									
15. The level of special knowledge									

Processing of results

The methodology makes it possible to determine the motivational and cognitive components of professional and pedagogical self-development. To determine the motivational component, it is necessary to calculate the total score on 1–9 indicators of the questionnaire. The following quantitative indicators determine the level of formation of motivational readiness for pedagogical self- development:

– 55 or more points – low level;

– 36–54 points – average level;

– 35 or less points – high level.

To determine the cognitive component, it is necessary to calculate the total score on 10–15 indicators of the questionnaire. The following quantitative indicators determine the level of formation of cognitive readiness for pedagogical self- development:

– 37 or more points – low level;

– 24–36 points – average level;

– 23 or less points – high level.

TOPIC 11. SUBJECTS OF EDUCATIONAL PROCESS AT UNIVERSITY

11.1. Characteristics of the student's personality as a subject of the educational process of the university.

11.2. The problem of the correlation (ratio) between the general and professional development of the student's personality. The problem of professional suitability.

11.3. Higher educational institution as one of the leading factors in the socialization of the student's personality. Students' adaptation to the educational process of the university.

11.4. Practical class.

11.1. Characteristics of the student's personality as a subject of the educational process of the university

The term "student" is of Latin origin, being translated means working hard, studying, that is, mastering knowledge. Students are treated as a special social category, a specific community of people united organizationally by the Institute of higher education.

Historically, this socio-professional category has developed since the emergence of the first universities. As a social group, students are characterized by a professional orientation, a well-formed attitude to the future profession, which depend directly on the accuracy (correctness) of the professional choice and the adequacy and completeness of the student's idea of the chosen profession.

A student as a person of a certain age and as a personality can be characterized from three sides:

– *biological*, which includes the type of higher nervous activity, the structure of analyzers, physical characteristics;

– *psychological*, which represents the unity of psychological processes, states and personality traits;

– *social*, which embodies social relations, qualities generated by the student's belonging to a certain social group.

The study of these aspects reveals the qualities and capabilities of the student, his age and personal characteristics. Modern students are, first of all, young people aged 17–25 years. In the existing classifications of human life periods, this age is defined as late adolescence or early adulthood.

If we analyze *a student as a person* of a certain age, then he will be characterized by: the highest level of development of such physical indicators as muscle strength, speed of reactions, speed endurance, etc.; the smallest values of the latent period of reactions to simple, combined and verbal signals, the optimum of absolute and differential sensitivity of analyzers, the greatest plasticity in education complex psychomotor and other skills; the highest speed of active memory and attention switching, solving verbal and logical tasks, etc.

Thus, the student age is characterized by the achievement of the highest results based on all previous processes of biological, psychological, and social development. This fact allowed B. G. Ananyev to conclude that this period of life is the most favorable for education and professional training. If we study the *student as a personality*, then this age is characterized as the period of the most active development of moral and aesthetic feelings, the formation and stabilization of character and, most importantly, mastering the full range of social roles of an adult: civil, professional, labor, etc. The motivational system and the system of values are being transformed (and it differs between boys and girls), special abilities are intensively developing in connection with professionalization, strong-willed qualities (purposefulness, determination, persistence, independence, initiative), interest in moral problems is increasing. This period is associated with the beginning of "economic activity", by which demographers understand the inclusion of a person in independent production activities, the beginning of a work biography and the creation of their own family.

Psychologists often call early adulthood a period of beginnings, because both in personal and professional life a person stands at the beginning of the path. According to D. Levinson, the most important tasks of this period are the correlation of dreams and reality, the formation of a career, the search for a mentor.

It should be noted that, like many researchers of developmental psychology, D. Levinson considers development as a regular sequence of stable and transitional stages. In the stable phase, development is characterized by the gradual achievement of the set goals, since the essential tasks of development at this stage seem to be solved.

In the transition phase, the methods of self-implementation are the subject of analysis for the individual, and new opportunities are the subject of search. So, the transition period includes the period of 18–20 years, when there is a problem of achieving independence from parents.

Then comes a stable phase, during which a person is looking for his place in adulthood. The crisis period is due to the need for self-determination of a young person after graduation from secondary school and the search for his place in the future, already independent life. This is the construction of the next stage of his life path, modeling his "I (Self)" with a focus on the future. A young man lives more in the future than in the present.

As a rule, life choices (like any choice) are accompanied by hesitations, doubts, excitement from uncertainty and, at the same time, responsibility for the choice. Student goals are often unrealistic. This may be due both to the unrealistic level of their claims, and to the life scenarios formed under the influence of their parents. The result of this can be disappointment, loss of meaning in life. To prevent this from happening, it is necessary to make an independent life choice, taking into account reality and a student's objective capabilities. At the same time, the ability of boys and girls to consciously regulate their behavior at the age of 17–19 is not fully developed. Often there is an unmotivated risk, inability to foresee the consequences of their actions, which may not always be based on worthy motives.

A significant influence on the student's life activity is exerted by his "I-concept". Self-assesment (self-esteem) develops by comparing the "ideal Self" with the "real Self". But the "ideal Self" has not yet been verified and may be accidental, and the "real Self" has not yet been comprehensively evaluated by the personality itself. This objective contradiction in the development of a young person's personality can cause him internal self-doubt and is sometimes accompanied by external aggressiveness, a sense of loneliness, misunderstanding, the formation of addictive behavior (one of the forms of deviant behavior with the formation of the desire to escape from reality by changing one's mental state).

The lower the level of self-assesment (self-esteem) of a person, the more likely it is that she suffers from loneliness. With age, self-assesment (self-esteem) becomes more and more differentiated, which is explained by the appearance of new social roles in an adult – professional, husband, wife, father, mother, etc.

When determining the main tasks of development in early adulthood, they most often turn to the theory of E. Erickson.

These tasks, according to the epigenetic concept (life is a series of tests, thanks to which the individual is continuously developing), include

the further formation of identity and the achievement of intimacy with other people. According to E. Erikson, adolescence is built around an identity crisis consisting of a series of social and individual-personal choices, identifications and self-determination. If a young man fails to solve these problems, he forms an inadequate identity, the development of which can go along four main lines:

1) avoiding psychological intimacy, avoiding close interpersonal relationships;

2) blurring of the sense of time, inability to make life plans, fear of growing up and change;

3) erosion of productive, creative abilities, inability to mobilize their internal resources and focus on some main activity;

4) the formation of a "negative identity", the rejection of self-determination and the choice of negative images for imitation.

Identity crisis or role confusion is characterized by the inability to choose a career or continue education.

E. Erickson emphasizes that life is a constant change. The successful resolution of problems at one stage of life does not guarantee that they will not reappear at the next or that a new solution to old problems will not be found.

Canadian psychologist J. Marsha identified 4 stages of identity development, measured by the degree of professional, religious and political self-determination of a young person:

– "vague, blurred identity" is characterized by the fact that an individual does not yet have stable beliefs, has not chosen a profession and has not faced an identity crisis;

– "early, premature identification" is observed if an individual joined the appropriate system of relations, but did not do it independently, as a result of a crisis and a test, but on the basis of other people's opinions, following someone else's example or authority;

– the stage of the "moratorium" is characterized by the fact that an individual is in the process of a normative crisis of self-determination, choosing from numerous development options the one that he can consider his own;

– "achieved, mature identity" is determined by the fact that the crisis is over, the individual has moved from self-search to practical self-implementation.

As numerous studies show, in the first years a student often has a question about the correctness of choosing a university, specialty,

profession. Often there are shifts in the mood of students – from enthusiastic in the first months after admission to skeptical when assessing the university, the quality of teaching, individual teachers, etc. We have to admit that professional choice is determined by random factors, so career guidance work with older students is extremely important.

The results of the research indicate that the student's ideas about the future professional activity (adequate/inadequate) directly correlate with the level of his attitude to learning: the less the student knows about the profession, the lower his positive attitude towards learning activities is.

Career guidance work includes both the provision of professional information (dissemination of information about the specialties in which training is conducted at university) and the formation of interest in the specialty. Professional orientation assists in the professional self-determination of an individual in accordance with his abilities and taking into account the needs of society, as well as in the formation of specific professional qualities.

Many universities hold various events for the professional orientation of schoolchildren and graduates of lyceums, colleges: holding open days, field events aimed at informing potential applicants, meetings of leading university scientists with schoolchildren, performances on television, radio, dissemination of information on the Internet (including the creation of groups in social networks), and also holding various Olympiads.

The conscious choice of profession by each student, their determination of their place in social work significantly improve the quality of the educational process at university and the training of highly qualified specialists.

The specific result of career guidance work is professional self-determination, that is, the individual makes a decision about choosing the type of future work activity – who to be, what social group to belong to, where and with whom to work. Professional self-determination is associated with the level of a person's claims, based on an assessment of their abilities and capabilities. The dynamics of professional self-determination depends largely on the content, methods and form of professional education and counseling.

If we consider the *student age in socio-psychological terms*, it can be noted that students, in comparison with other population groups, are distinguished by the highest educational level, social activity, the most active consumption of culture and a high level of cognitive motivation.

In line with the personal-activity approach, the student is considered as an active self-organizing subject of pedagogical interaction. It is characterized by a specific orientation of cognitive and communicative activity to solve specific professionally-oriented tasks.

The student acts as a subject of educational activity, which is determined primarily through achievement motivation and cognitive motivation. In learning, achievement motivation is subordinated to cognitive and professional motivation. It arises in a problematic situation and develops with the right interaction and attitude of students and teachers. However, the results of surveys show that the majority of students in technical universities have insufficient motivation to master a profession.

Most students do not know how to listen and take notes of lectures, work with literature, speak to an audience, participate in discussions, independently analyze situations. The teacher faces a responsible psychological and pedagogical task of forming a student as a subject of educational activity, teaching him the ability to plan and organize his activities, while taking into account the difficulties of the adaptation period of students' training in the first year.

In general, the development of the student's personality as a future specialist with higher education goes in the following directions:

– ideological conviction, professional orientation are strengthened, the necessary abilities are developed;

– mental processes, states, experience are improved, "professionalized";

– the sense of duty, responsibility for the success of educational and professional activities increase, individual style is formed;

– the claims of the individual in the field of their future profession are growing;

– based on the intensive development of social and professional experience, the formation of professionally important qualities, the general maturity and stability of the student's personality grow;

– the share of student self-education in the formation of the qualities and experience necessary for him as a future specialist increases;

– professional independence and readiness for future practical activities develops.

It must be remembered that a modern specialist must have a solid theoretical background, productive creative thinking, managerial and organizational skills, information culture, a high general culture, and

knowledge of foreign languages. A modern specialist should be distinguished by initiative and responsibility, the need for constant updating and enrichment of knowledge, readiness for innovative and commercial activities.

The identification of specific features and qualities needed by a specialist depends significantly on the psychological analysis of the requirements for representatives of individual specialties. It is known that in various professions, mental processes and functions, personality traits of a specialist manifest themselves differently, have different meanings. Identification of the psychological characteristics that distinguish one specialty from another makes it possible to specifically determine the particular goals of educating and teaching students, to outline specific ways of forming the necessary knowledge, skills, and professionally important personal qualities in the educational process.

11.2. The problem of the correlation (ratio) between the general and professional development of the student's personality. The problem of professional suitability

The personality's professional formation is the development of a professional orientation, competence, socially significant and professionally important qualities and their integration, readiness for constant professional growth, the search for optimal methods of high-quality and creative performance of activities in accordance with the individual psychological characteristics of the individual. The personality's professional formation is a process of development, which comprises a consistent change of certain stages. The influence of various factors on the scenario (trajectory and pace) of a person's professional development depends on age, gender and stages of formation. The most common scenarios are the following:

– smooth, conflict-free and crisis-free professional development within the same profession;

– accelerated development at the initial stages of formation with subsequent stagnation and decline. It is also implemented, as a rule, within the framework of one profession;

– stepwise, abrupt personal and professional development, leading to peak achievements (not necessarily within the same profession) and accompanied by crises and conflicts of professional formation.

The crises of professional formation are understood as short periods (up to a year) of radical restructuring of professional consciousness, accompanied by a change in the vector of its professional development.

The main *signs of professional crises* are:

– loss of a sense of the new;

– lagging behind life;

– a decrease in the level of professionalism;

– internal confusion;

– awareness of the need to reassess yourself;

– decrease in self-esteem;

– fatigue and a feeling of exhaustion of their capabilities.

E. F. Zeer and E. E. Simanyuk distinguish **5 stages of personality's professional formation**:

1) option (formation of professional intentions, professional self-determination, conscious choice of profession based on individual psychological characteristics);

2) professional training (formation of a professional orientation and a system of socially and professionally oriented knowledge, skills, abilities, acquisition of experience in solving typical professional tasks);

3) professional adaptation (entering the profession, mastering a new social role, mastering new technologies of the profession, gaining experience in independent professional activity);

4) primary and secondary professionalization (formation of professional mentality, integration of socially and professionally important qualities and skills into relatively stable professionally significant constellations, high-quality performance of professional activities);

5) professional mastery (full implementation, self- implementation of the individual in creative professional activity on the basis of mobile integrative psychological neoplasms ("acme") of professional development).

According to the authors, professional development crises are of a normative nature and accompany all of the above stages of a person's professional development.

E. F. Zeer identifies the following *normative crises of professional formation*:

– educational and professional crisis (14–17 years old);

– career choice crisis (16–18 years old);

– crisis of professional expectations (18–20 years);

– crisis of professional growth (23–25 years);

– professional career crisis (30–33 years);
– crisis of socio-professional self-actualization (40–42 years);
– crisis of profession's loss (55–60 years old).

Let's take a closer look at their psychological characteristics.

At the stage of option, there is a change of the leading activity from educational and cognitive to educational and professional. There is a re-evaluation of educational activities and, depending on professional intentions, motivation changes. The social situation of development is radically changing. At the same time, the collision of the desired future and the real present is inevitable, which acquires the character of a crisis.

At the stage of professional education, many students experience disappointment in the profession they receive. Dissatisfaction with individual subjects arises, doubts arise about the correctness of the professional choice, and interest in studying decreases. As a rule, the crisis of choosing a profession is clearly manifested in the first and last years of professional training.

At the stage of professional adaptation, young specialists begin to work independently. The professional development situation is radically changing: a new team of different ages, a different hierarchical system of industrial relations, new socio-professional values, a different social role and a fundamentally new type of leading activity. The main reason for the crisis is the discrepancy between real professional life and ideas and expectations formed.

The crisis of professional expectations (18–20 years) is expressed in the experience of dissatisfaction with the organization of labor, its content, job responsibilities, industrial relations, working conditions and wages.

The next normative crisis of professional growth (23–25 years) occurs after 3–5 years of work, at the final stage of primary professionalization. By this time, the specialist has mastered and productively performs his professional duties in accordance with the standards (norms), has determined his socio-professional status in the hierarchy of industrial relations. Consciously or unconsciously, a person feels the need for further professional growth. In the absence of prospects for professional growth, a person experiences discomfort, mental tension, thoughts about possible dismissal, a change of profession appear.

Further professional development of the specialist leads to secondary professionalization. The peculiarity of this stage is the high-quality performance of professional activity. The ways of its implementation

have a distinctly individual character. A specialist becomes a professional. Socio-professional values and attitudes are being radically rebuilt, the ways of performing activities are changing, which leads to a significant transformation of both the social situation and the leading activity.

Often a person outgrows his profession, therefore, dissatisfaction with himself and his professional position increases. The professional self-consciousness formed by this time suggests alternative scenarios for further career and not necessarily within the framework of this profession. The personality feels the need for self-determination and self-organization.

The contradiction between the desired career and its real prospects leads to the development of a professional career crisis (30–33 years). At the same time, the "I-concept" is undergoing a serious revision, adjustments are being made to the existing industrial relations – the professional development situation is being restructured.

At the stage of mastery, which, of course, not every specialist reaches, there is no change in the leading activity, the nature of its implementation changes – the activity becomes creative. This stage is characterized by an innovative level of performance. The main psychological neoplasms at this stage are professional maturity, integration of professionally important qualities, individual style of activity, identification of a person with professional activity.

The driving factor of individual's further professional development is the need for self-implementation. Professional self-actualization leads to dissatisfaction with oneself, surrounding people, circumstances and profession, giving rise to a crisis of socio-professional self-actualization (40–42 years). This crisis is not a normative one, since not every professional is able to rise to the level of mastery.

The last normative crisis of professional development is caused by the fact that a person leaves professional life. The pre-retirement period is becoming a crisis for many workers. This is due to the need to learn a new social role and norms of behavior. Retirement means a narrowing of the socio-professional field and contacts, a decrease in financial opportunities. The severity of the crisis depends on the nature of work (manual workers experience it easier).

Experiencing a crisis, a person, as a rule, rises to a higher level of development due to the restructuring of its psychological structure. At the stages of option, professional education, a change in the leading

activity and a radical change in the social situation are of decisive importance in the emergence of crises. In the subsequent stages, subjective factors play an important role.

It should be noted that in addition to normative crises of a person's professional development, there may also be non-normative ones, which are caused by random, unforeseen events.

Any professional activity puts forward certain conditions and requirements in terms of the required level of suitability for it, which imposes a number of restrictions on the choice of a particular profession. That is why the process of choosing a profession, determining a professional path, professional development and examination of the success of assimilation and implementation of labor activity provides for the need, on the one hand, to assess the level of a person's compliance with the requirements of the profession, on the other hand, to actively form and train him as a specialist, taking into account the time limit allotted for this.

The determination of compliance with the requirements of a specific work activity and professional training of a specialist in scientific and practical terms reflects the concept of **professional suitability** of a particular person, which is determined by the totality of individual human characteristics that affect the success of mastering any work activity and the effectiveness of its implementation.

Professional suitability can be considered as a set of a person's initial individual qualities that determine the success of the formation of suitability for a particular activity (or class of activities), and reflect the actual achieved level of development of professionally significant qualities that ensure the effective implementation of specific professional tasks. These include qualities that characterize the features of labor education and training, professional preparedness, the psychological structure of the individual, the state of health and physiological functions, and physical development, which are determined by the requirements of the profession.

Professional suitability depends on the level of a person's satisfaction with the process and results of his work. In modern society, a person's satisfaction with his profession depends not only on the labor process itself, but also on external, but very significant factors: the conditions of activity, the socio-psychological characteristics of the team, the level of material support, the prestige of the profession, opportunities for self-affirmation, self-improvement etc.

Thus, the concept of professional suitability inherently reflects both the various person's individual characteristics necessary for the successful performance of labor (educational) activities, his suitability for a particular activity, and the characteristics of the object of labor (content, means, conditions, organization of activities) from the point of view of their correspondence to human capabilities, that is, the suitability of the object of labor for human being.

The process of formation of *professional suitability* in the course of the person's professional development also *includes a number of stages*, the main of which are the following:

– *labor upbringing and training* (preparation for work and choosing a profession) – upbringing a child's love for work, mastering the simplest tools and methods of labor, forming readiness for work, needs and understanding of its necessity, development of general labor skills;

– *professional orientation* – assistance in choosing a profession based on professional education, consultation, correction of professional plans;

– *professional selection* – determination of the degree of a person's suitability for a specific type of activity based on a comparison of his individual characteristics with the requirements of the profession (at this stage it is also possible to solve the tasks of distributing specialists, recruiting educational and professional groups, selecting a specialist for a functioning group, etc.);

– *professional training* – substantiation of recommendations for programs, methods and means of teaching and training, for objective methods and criteria for assessing the level of professional readiness;

– *professional adaptation* – development of tools, methods and criteria for assessing the peculiarities of adaptation of the subject of labor to the content and conditions of a specific activity, substantiation of recommendations to accelerate this process. The professional adaptation of a novice specialist includes the processes of his "entry" into the professional environment, the acquisition of professional experience, mastering the standards and values of the professional environment, its culture;

– *professional activity* – ensuring the rational organization (regulation), conditions and process (content) of labor activity, high efficiency, quality, labor safety, professional improvement, health, job satisfaction;

– *professional certification* – periodic assessment of professional qualifications in order to determine the conformity of the position and

substantiate recommendations for job assignments, transfers, as well as referral to study, retraining;

– *professional rehabilitation* – restoration of the functional state of the body and psyche after hard work and previous illnesses, with the development of persistent negative dominant states as a result of frequent professional failures, etc.

The content of each of these stages is specific in terms of goals, methods, means, and deadlines for their implementation. Common to them is the need to determine those indicators that are criteria for the success of diagnostic procedures, forecasting and the formation of professional suitability.

According to E. A. Klimov, there are different *degrees of a person's professional suitability*:

– unsuitability (for this profession). It can be temporary (due to illness) or almost irresistible (due to disability). It is worth talking about unsuitability when the deviation in health is not compatible with this profession;

– suitability (for a particular profession or group of such) is characterized by the absence of contraindications and there is a high probability that a person will be a good specialist in this field;

– compliance (of a given person with this field of activity) is characterized not only by the absence of contraindications, but also by the presence of personal qualities that are suitable for choosing this profession or a group of professions;

– vocation (of this person to this field of work).

There can be no absolute professional suitability, because all people are different, and the same qualities, being characteristic of different people, have different shades, and the number of professions is steadily growing. The main task of career guidance is to determine the qualities that a person will need for a particular profession, which qualities he has already developed to a sufficient degree, and which he will have to develop. However, the need to conduct professional selection to a university based on the requirements that a particular specialty imposes on a person, its properties, is indicated today by everyone who somehow deals with the organization of the educational process and the subsequent employment of specialists with higher education.

Determining professional suitability at the selection stage means determining such inclinations, features of mental processes and personality

traits that meet the requirements of the future profession and through which significant success in mastering it can be achieved.

Surveys of first-year students show that in some universities only a third of students clearly imagine their future profession, and more than half – very vaguely or do not know anything specifically about it.

One of the ways to improve the system of selection of applicants is associated with a more complete consideration of a person's personal characteristics, the degree of awareness while choosing a future profession. An important role here, in addition to professional diagnostics, can also be played by interviews conducted now only upon admission to some specialties, which involve dean's office staff, heads of departments, the most experienced teachers, established professionals in the field of the specialty chosen by the applicant, psychologists and social educators.

Psychological selection to university is a complex problem that has not found a sufficiently complete theoretical and practical solution. The difficulty lies in the organization and conduct of the professionography of those specialties to which university graduates are sent, in the selection of tests and techniques that determine both psychophysiological and personal characteristics that contribute to the successful training of specialists, and most importantly – high efficiency of future professional activity. To solve these problems, scientifically based experiments, careful observations and the development of reliable psychodiagnostic tools are necessary.

The methodology for determining personal qualities and characteristics of mental processes adequate to a particular professional activity includes the study of personal files, filling out a questionnaire specially developed by the university, conversations, testing.

The problems of professional orientation and selection to higher school are complex in organizational terms, require appropriate training and certain material costs, but all this will pay off quite well at the expense of moral (people who are constantly dissatisfied with their work may have a shift of life values to the non-professional sphere, the formation of super-valuable ideas, develop neuroses, somatoform disorders, etc.) and the material effect (budget savings) in the course of training and further practical activities of specialists.

11.3. Higher educational institution as one of the leading factors in the socialization of the student's personality. Students' adaptation to the educational process of the university

B. G. Ananyev considered student age as a separate ontogenetic stage of an individual's socialization. During the student's studies at the higher school, the socialization of the individual through the education system is completed, the foundations for further socialization in independent professional activity are laid, life goals and attitudes are adjusted.

During this period, new social roles are adopted and mastered – the role of a student, a future specialist, a youth leader, etc.; orientation to the social expectations of teachers and classmates to achieve the desired social status in the group; comparison of oneself with other students and professionals; as well as suggestibility and conformity.

The source of a student's socialization is not only the content of the pedagogical process at university, but also his environment, student group, mass media, public youth associations, etc. The process of socialization of the future specialist's personality largely depends on the success of the student's adaptation to the educational process of the university. The success of students' educational and professional activities, the process of their professional formation depends on how long the adaptation process takes and with what costs. The success of socio-professional adaptation is decisively influenced by the level and nature of motivation, the peculiarities of the educational environment, the level of personal and professional development. The most intense adaptation process is observed during the first year.

The adaptation process in a broad sense includes many phenomena: from the elementary act of adaptation of a living organism to the environment to the most complex social and psychological adaptation of a person, which is the process of his interaction with the environment.

Social adaptation is understood as the process of changes in social, socio-psychological, moral-psychological, economic, demographic relations between people, adaptation to the social environment. **Psychological adaptation** is a process that occurs in response to the significant novelty of the environment, which triggers the motivation of adaptive human behavior, the formation of goals and behavior programs.

Normal adaptation is characterized by a stable adaptability of the personality in typical problematic situations without pathological changes

in its structure and, at the same time, without violations of the standards (norms) of the social group in which the personality's activity takes place. *Deviant adaptation* provides satisfaction of the individual's needs in this group or social environment, while the expectations of other participants in the social process are not justified by such behavior.

Deviant adaptation can be of two types: nonconformist (overcoming problematic situations in the ways, which are unusual for the group) and innovative (creative).

Pathological adaptation is a socio-psychological process carried out with the help of pathological forms and mechanisms of behavior, which leads to the formation of pathological character complexes that are part of neurotic and psychotic syndromes.

The basis of personality's adaptation is the contradiction between the requirements imposed by the conditions of the new environment and the readiness of the individual for them on the basis of previous experience.

A student's adaptation, therefore, is the process of bringing the main parameters of his social and personal characteristics into line, into a state of dynamic equilibrium, with the new conditions of the university environment.

This process includes a number of stages.

At the preparatory stage, there is a professional self-determination of applicants and the formation of an initial psychological base to overcome the difficulties of the first period of adaptation to learning.

The indicative stage is associated with the assimilation of existing standards (norms), rules and compliance with their requirements.

At the third stage, there is an adaptation to the characteristics and requirements determined by the chosen specialty, as well as to the educational student group, there is a convergence of the goals and values of the group and the individual included in it, the assimilation and interpretation of group standards (norms), inclusion in the role structure of the group. Further, the first-year student, by clarifying knowledge about the specifics of the chosen specialty, performs an initial assessment of the correctness of professional self-determination and behavior in the group.

In the study by S. Yu. Basovskaya, *three stages of a student's adaptation to the conditions of the educational process at a university*, interconnected with the intellect, are distinguished.

The first stage of the adaptation process – autonomization – is characterized by the fact that a first-year student opposes himself to the environment.

The identification stage involves the inclusion of a first-year student in the system of the university environment, which is characterized by both structural and functional components. In the process of adaptation, the student must realize the purpose of the learning system, get involved in it and master its specific methods of educational work.

The stage of integration is achieved when a student feels like an element of the educational space of the university.

Researchers distinguish different types of adaptation in the general adaptation process of university students. However, most often adaptation is considered in three types, reflecting the main directions of students' activities:

1) *didactic* (adaptation to new forms of teaching, control and assimilation of knowledge);

2) *socio-psychological* (inclusion in the student team, assimilation of its rules, traditions, norms, establishing relationships with the teacher, administration, group members);

3) *professional* (the formation of professional qualities, the development of knowledge, skills, abilities, requirements for the profession).

Let's consider the importance of different types of adaptation in the general adaptation process of university students. The need for *didactic students' adaptation* is caused by the fact that the learning process in higher education is based on principles different from the didactics of secondary school:

– convergence of academic work with scientific;

– high students' activity in independent educational and cognitive activity;

– professionalization of the content of the studied disciplines;

– a large amount of information to be assimilated.

In this regard, the initial stage of studying at university is associated with a radical breakdown of the student's prevailing ideas, habits, the need to change and rebuild their behavior and activities. The university needs a new system, a new way of life that meets new tasks of education and upbringing:

– compulsory (mandatory) attendance of all training sessions (in the absence of strict control);

– the need for timely and thorough preparation for classes and active participation in their work;

– the ability to work purposefully and systematically, to mobilize all your forces;

– availability of the necessary skills and abilities to work with various sources of information, rational methods of intellectual work.

Difficulties in restructuring activities can lead to poor academic performance in the first year and expulsion of students based on the results of sessions; excessive emotional stress, which leads to disappointment in choosing a future profession. It is necessary to optimize the educational process on the basis of a personality-oriented, subject-subject model of pedagogical interaction. In it, the teacher and the student cooperate as equal communication partners. The tasks are to create conditions for students' psychological and pedagogical support within the framework of mutual respect, the autonomy of each of the subjects of communication, the formation of a single psychological space for the successful achievement of the final result of training.

The content of the teachers' work to promote speedy didactic adaptation of first-year students includes:

– organizing meetings of students with faculty and department teachers, student activists;

– the work of student groups' curators to familiarize students with the system of education at university;

– inclusion in lecture courses in all disciplines of an introductory topic on familiarization with the peculiarities of student's academic work;

– exchange of teachers' experience; clear organization of students' independent work, its rationing and control, etc.

Students' socio-psychological adaptation is associated with the acceptance by the individual of the social role of a first-year student, and, consequently, a new socio-psychological status. The effectiveness of this process largely depends on how adequately the individual perceives himself and his social connections. The presence of strong-willed, communicative abilities can help a first-year student overcome barriers to entering a new environment. The essence of such a social status can be considered mastery of the standards (norms) and functions of future professional activity.

The analysis of the literature allows us to identify some characteristics of the status of a first-year university student:

– awareness of a new social position, increased self-esteem;

– the desire to gain a foothold in this new position for yourself, to achieve the first successes confirming a new higher position;

– interest and diligence in performing educational and other work within the walls of the university;

– diversity of academic and extracurricular interests.

Signs of the implementation of a new social status can be considered the adoption by a person of goals, values and standards of actions and behavior that characterize a particular profession. In addition, the peculiarities of students' adaptation are related to the fact that this process occurs with the formation of the primary team.

The vast majority of students in the course of surveys emphasize that it is important for a freshman to have a friendly atmosphere in the group, help and support from classmates, and so on. The difficulties of students' socio-psychological adaptation are due to the novelty of the social environment, the loss of the usual team, relatives and friends, the absence of a friendly and close-knit student group. Negative experiences (confusion, feeling of loneliness, feeling of uselessness, homesickness) and moods can become the results of the influence of these problems and difficulties.

Group cohesion activities are used as measures to optimize the students' socio-psychological adaptation; excursions around the city and the educational institution; assistance in organizing the life of first-year students living in a dormitory; patronage of undergraduates; involvement of first-year students in the social life of the faculty, university, etc.

Students' professional adaptation is considered from different positions.

From the perspective of the activity (activity-based) approach, professional adaptation is interpreted as the introduction of a person to certain types of activities, their assimilation, that is, as a process of formation of knowledge, skills, professional qualities, personality traits at the stages of university education.

From the perspective of the role approach, professional adaptation is understood as familiarization with the professional role position and its subsequent development; active internalization of the system of new roles and behavioral patterns.

Under the professional role, researchers understand the implementation of the rights and obligations contained in the role position, in accordance with the individual characteristics of a person.

Students' professional adaptation is the process and result of active entry into the profession in the conditions of university education through the assimilation of the content and methods of performing future independent professional activity, as well as the formation of professionally important characteristics that act as its prerequisites.

The *difficulties of a student's professional adaptation* include: an unclear idea of his professional future; inability to make a correct professional

self-assessment; misunderstanding of the logic of professional formation; inability to see the professional orientation of the educational process.

Methods of managing the process of students' professional adaptation are the following: explanatory acquaintance of students with the purpose and content of the main educational program, curriculum; familiarization of students with the purpose, content and organization of educational and upbringing processes at university; strengthening the professional orientation of the disciplines read; individual work to explain the personal significance of training in the chosen specialty; correction and improvement student's ideas about future professional activity and its prospects; development of components of professional self-awareness; formation of a stable positive attitude to the profession.

The *criteria for the success of students' adaptation* to educational activities are most often divided into objective (academic performance, indicators of social and scientific activity, indicators of general and professional orientation, stabilization of the properties of attention, memory, thinking) and subjective (attitude to academic subjects, chosen profession, acquired knowledge).

Adaptation of students who lived before entering the university in rural areas, on the one hand, is subject to the general laws of adaptation processes, and on the other – has a number of specific features. The difficulties subjectively experienced by the vast majority of students are largely due to the fact that adaptation to university studies for rural youth is combined with adaptation to an urban lifestyle that radically changes the ways of life.

Thus, the transition to new learning conditions, to an urban lifestyle is a complex adaptive process, the violation of which affects the psychological state and neuropsychic health of students, their personal development and the effectiveness of professional training. Professional orientation, the level of assimilation of the content and methods of carrying out future independent professional activities, as well as the formation of professionally important personality traits directly depend on the success of students' socio-psychological adaptation. This gives grounds to classify the problem of psychological support for students during the period of adaptation to study at a university and to living conditions in the city as one of the most urgent problems of higher education. The psychological service of universities, teachers and curators of study groups should carry out work to prevent, identify and

correct socio-psychological disadaptation of students. The result of all this work will be the success of educational and professional activities, in unity with a positive self-attitude and attitude towards this activity, as well as subjective satisfaction with the choice of profession.

11.4. Practical class

Questions for discussion

1. Characteristics of the student's personality as a subject of the educational process of the university.
2. Structure, stages and conditions of successful professional self-determination and formation of a student at a university. The problem of professional suitability.
3. The problem of student's motivation in the educational process of the university. Psychological features of the transformation of cognitive motives into professional motives, needs and interests.
4. Students' adaptation to the educational process of the university, the conditions of its effectiveness.

Practical tasks

1. Prepare an essay on the topic "A student of the XXI century".
2. Study the features of students' adaptation to the educational process of the university ("Method for diagnosing educational stress" by Yu. V. Shcherbatykh and "Method for express diagnosing neurosis" by K. Heck and H. Hess).

Method for diagnosing educational stress
(Yu. V. Shcherbatykh)

1. Try to determine how much you are worried about the following events. Evaluate each event on a 10-point system, putting any number from "1" (it does not hurt me at all) up to "10" (very disturbing and annoying).
   1.1. High prices (for transport, food, clothing).
   1.2. Suddenly spoiled weather, rain, snow.
   1.3. The car that sprayed you with mud.
   1.4. Strict, unfair boss (teacher, parent).
   1.5. Government, deputies, administration.

2. Mark on a 10-point system which of the following qualities are inherent in you (10 points – if this property is very pronounced, 1 – if it is absent).

2.1. Excessively serious attitude to life, study, work.

2.2. Shyness, timidity, modesty.

2.3. Fear of the future, thoughts about possible troubles and problems.

2.4. Bad, restless sleep.

2.5. Pessimism, the tendency to note mainly negative features in life.

3. How your stress affects your health (evaluate the signs on a 10-point scale).

3.1. Palpitations, heart pain.

3.2. Difficulty breathing.

3.3. Problems with the gastrointestinal tract.

3.4. Muscle tension or trembling.

3.5. Headaches, increased fatigue.

4. How typical is the use of the following stress relief techniques for you (note the 10-point system, where "1" is not typical at all, and "10" is almost always used).

4.1. Alcohol.

4.2. Cigarettes.

4.3. TV.

4.4. Delicious food.

4.5. Aggression (to throw out evil on another person).

5. How typical is the use of the following stress relief techniques for you (note the 10-point system, where "1" is not typical at all, and "10" is almost always used).

5.1. Sleep, rest, change of activity.

5.2. Communication with friends or a loved one.

5.3. Physical activity (running, swimming, football, roller skates, skiing, etc.).

5.4. Analysis of your actions, search for other options.

5.5. Changing your behavior in this situation.

6. How has your constant stress level changed over the past three years? (mark V)

Significantly decreased	Slightly decreased	Hasn't changed	Slightly increased	Significantly increased
–20	–10	0	+10	+50

Processing of results

In fact, this stress evaluates the level of stress sensitivity – an indicator that is the reverse of stress resistance. Therefore, the higher the indicators of this test are, the lower the stress sensitivity of a person is. Sum up the results on the first 4 scales. You will receive points that will vary from 20 to 200. This is a basic indicator of stress sensitivity. The value of this indicator in the range from 70 to 100 points can be considered satisfactory.

Then the indicator of dynamic sensitivity to stress is calculated. To do this, the sum of the results for scale 5 is subtracted from the base result (it shows the ability to resist stress with the help of adequate behavior).

Then, an indicator of scale 6 is added to the result obtained (with "+" or "–"), depending on the choice of the person. If stress bothers a person less recently, then the result will be with a minus and the final result will decrease, and if stress increases, then the final indicator of stress sensitivity will increase.

Average test results

Stress resistance	Standard	Increased sensitivity to stress
Less than 35 points	From 35 to 85 points	More than 86 points

Interpretation on separate scales

The first scale defines an increased reaction to circumstances that we cannot influence. The average indicators are from 15 to 30 points.

The second scale shows a tendency to overcomplicate everything, which can lead to stress. The average indicators are from 14 to 25 points.

The third scale is predisposition to psychosomatic diseases. The average indicators are from 12 to 28 points.

The fourth scale defines destructive ways to overcome stress. The average indicators are from 10 to 22 points.

The fifth scale defines constructive ways to overcome stress. The average indicators are from 23 to 35 points.

Method for express diagnosing neurosis
(K. Heck and H. Hess)

Instruction. After reading the question or statement, answer it "yes" or "no".

1. Do you think that you are internally tense?
2. I'm often so immersed in something that I can't fall asleep.
3. I feel easily vulnerable.
4. It's hard for me to talk to strangers.
5. Do you often have a feeling of indifference and fatigue for no particular reason?
6. I often have the feeling that people are looking at me critically.
7. Are you often haunted by useless thoughts that do not get out of your head, although you try to get rid of them?
8. I'm pretty nervous.
9. It seems to me that no one understands me.
10. I'm quite irritable.
11. If they hadn't been against me, my business would have been more successful.
12. I take troubles too close and for a long time.
13. Even the thought of a possible failure worries me.
14. I had very strange and unusual experiences.
15. Do you sometimes feel happy or sad for no apparent reason?
16. Throughout the day, I dream and fantasize more than I need to.
17. Is it easy to change your mood?
18. I often struggle with myself not to show my shyness.
19. I would like to be as happy as other people seem to be.
20. Sometimes I shiver or have chills.
21. Does your mood often change depending on a serious reason or without it?
22. Do you sometimes feel a sense of fear even in the absence of real danger?
23. Criticism or reprimand really hurt me.
24. Sometimes I am so restless that I can't even sit in one place.
25. Do you sometimes worry too much about minor things?
26. I often feel dissatisfied.
27. I find it difficult to concentrate when doing any task or work.
28. I do a lot of things that I have to regret.

29. For the most part I am happy.
30. I'm not confident enough.
31. Sometimes I feel really worthless to myself.
32. Often I feel just bad.
33. I delve into myself a lot.
34. I suffer from feelings of inferiority.
35. Sometimes everything hurts me.
36. I have a depressing state.
37. I have something with nerves.
38. It is difficult for me to maintain a conversation when meeting.
39. The hardest struggle for me is the struggle with myself.
40. Do you sometimes feel that the difficulties are great and insurmountable?

Processing of results

The methodology provides only preliminary and generalized information. Final conclusions can be made only after a detailed study of the personality. The number of affirmative answers is counted.

0–23 points. This number corresponds to low neuroticism and indicates emotional stability, a positive background of experiences (calmness, optimism), initiative, self-esteem, independence, social courage, ease of communication.

24 or more points. This number corresponds to a high probability of neurosis (neurotization) and indicates a pronounced emotional excitability, resulting in negative experiences (anxiety, tension, irritability, confusion), lack of initiative, which forms experiences associated with dissatisfaction of desires, egocentric personality orientation, which leads to hypochondriac fixation on somatic sensations and personal shortcomings, difficulties in communication, social timidity and dependence.

Recommendations: Diversify your methodological arsenal, allocate more time for collective discussions. Use emotionally saturated information more often, show more intolerance to discipline violations. When passing the certification, pay special attention to the conduct of open lessons: carefully plan the lesson by time, try to use a variety of methodological techniques in it, especially requiring the collective work of the whole class, choose a topic that is interesting for students. Writing a creative work with an analytical mindset will not be a problem for you.

TOPIC 12. STUDENT'S LEARNING (EDUCATIONAL) ACTIVITY

12.1. Learning activity as a special type of activity.
12.2. The specifics of a university student's learning activity.
12.3. Psychological aspects of modern concepts of learning (teaching) and organization of learning activities.
12.4. Practical class.

12.1. Learning activity as a special type of activity

Learning activity can be defined as an organized and purposeful process, as a result of which a person acquires new or changes his existing knowledge, skills and abilities, develops his abilities.

In the general theory of learning (Ya. A. Komensky, A. Disterverg, K. D. Ushinsky, M. Ya. Basov, P. P. Blonsky, L. S. Vygotsky), a psychological theory of learning activity was formed. Its developers are D. B. Elkonin, V. V. Davydov, A. K. Markova, P. Ya. Galperin, N. F. Talyzina. The psychological foundations were laid by L. S. Vygotsky, S. L. Rubinstein, the specific content was formulated by A. N. Leontiev.

I. I. Ilyasov, describing the learning activity, noted that it is specifically aimed at mastering the educational material and solving educational tasks, it develops common methods of action and scientific concepts, and common methods of action precede the solution of tasks. D. B. Elkonin notes that learning activity meets cognitive, unsaturated needs and leads to changes in the subject himself, I. Lingart – that the mental properties and behavior of the student change in it depending on the results of their own actions.

Learning activity has a social character, is aimed at assimilating the riches of culture and science accumulated by mankind; it is socially significant and evaluated; corresponds to socially developed standards of education (learning) and takes place in special public institutions.

The content of learning (educationa) activity, according to V. V. Davydov, is theoretical knowledge, which, in turn, is defined as the unity of meaningful abstraction, generalization and theoretical concepts. Thus, in learning activity there is an ascent from the abstract to the concrete, from the general to the particular.

The subject content of learning activity is analyzed in line with the theory of activity and assumes the presence of the same structural components in it as in other types of activity: the subject, tools, methods, product and result.

The subject is what the activity is aimed at. Learning activity is aimed at mastering knowledge, mastering generalized methods of action, working out techniques and methods of action, their programs, algorithms.

The tools of carrying out learning activities are considered in 3 directions:

1) intellectual actions underlying the cognitive and research functions of learning activity (mental operations);

2) means in the form of which knowledge is assimilated, individual experience is reflected and reproduced;

3) background knowledge, through the inclusion of which new knowledge is structured individual experience, the thesaurus of the student.

Methods are how knowledge is gained. In different concepts, the following actions are distinguished as methods of learning activity:

– reproductive, problem-creative, research and cognitive;

– orientation, stages of transition from external, objective action to internal, mental action, control.

The product of learning activity is structured and actualized knowledge, which underlies the ability to solve problems requiring its application in various fields of science and practice; internal new formation of the psyche and activity in motivational, value and semantic plans; accumulation of individual experience through the assimilation of the socio-historical experience of mankind. The further activity of a person, his communication depends on the structural organization, consistency, depth and strength of individual experience.

The result of learning activities may be the need to continue learning, interest, satisfaction from learning or unwillingness to learn, a negative attitude towards school, university, avoiding learning, not attending classes, leaving school, university.

In some works, it is proposed to distinguish three main components of learning activity: motivational, operational and control and evaluation. However, most often its structure includes:

– learning (educational) motivation;

– learning situation (consists of a learning task and learning actions);

– control (self-control);

– assessment (self-assessment).

Learning (educational) motivation – this is a particular type of motivation, which is almost always decisive for learning activities. According to the Yerkes-Dodson law, the effectiveness of activity depends on the strength of motivation. However, the direct connection remains only up to a certain limit: if the motivation is too strong, the level of activity and tension increases, as a result of which the activity worsens. But the Yerkes-Dodson law does not apply to cognitive motivation, since the following is observed in a person who passionately wants to learn: the more he learns, the stronger his thirst for knowledge becomes. Motivation can be internal or external to the activity. If the activity is significant for the individual in itself (for example, the cognitive need is satisfied in the learning process), then we have internal motivation. If learning activity acts only as a means to achieve other goals – personal success, satisfaction of ambition, avoidance of punishment, while learning activity is to some extent forced and acts as an obstacle that must be overcome on the way to the main goal, then we are talking about external motives.

Pedagogical practice shows that some students are more motivated by the process of cognition in the course of learning activities, while others are motivated by relationships with people that develop within it. Accordingly, it is customary to distinguish 2 large groups of motives for learning activity – cognitive and social.

Cognitive motives are related to the content of learning activity and the process of its implementation. Among them there are the following:

– broad cognitive motives, consisting in the orientation of students to acquire new knowledge;

– educational and cognitive motives reflecting the orientation towards the assimilation of ways of acquiring knowledge;

– the motives of self-education, consisting in the focus on self-improvement of ways of obtaining knowledge.

Social motives are also divided into several subgroups:

– broad social motives reflecting the desire to gain knowledge in order to be useful to society, an understanding of the need to study, a sense of responsibility, a desire to prepare well for a future profession;

– narrow social motives (positional), which are manifested in the desire to take a certain position in relationships with others, to get their approval;

– the motives of social cooperation are related to orientation towards other people. At the same time, the student not only wants to communicate and interact with others, but also strives to realize, analyze the ways of their cooperation, constantly improve them.

All types of motives are closely related to each other and are formed in direct dependence on each other. Analyzing learning activities, it is important to take into account the entire structure of the motivational sphere of the individual.

The learning situation is an integral unit of the educational process. It can be problematic or neutral in content. Neutral learning situations are associated with the assimilation of experience as a result of working with the information received.

Problematic situations are distinguished by the fact that a person is faced with a theoretical or practical problem that needs a new vision or approach to understanding information, in other ways of processing it.

The learning situation includes two main components: the learning task and the learning actions necessary to solve it. *A learning task* is a requirement reflected in consciousness to perform some action in order to bring the unknown and the required into line. This is a complex system of information about an object, where some of the information is presented, and some is unknown. A distinctive characteristic of a learning task is that its purpose and result consist in changing the subject itself, and not in changing the subjects with which he acts.

At the initial stage, it is necessary to understand and "accept" the task. The solution of the learning task itself is carried out through learning actions that turn into operations (methods of action).

Types of learning actions:

1) *from the position of the subject of activity (individual)*:

– goal setting actions;

– programming actions;

– planning actions;

– performing actions (verbal and non-verbal, formalized and non-formalized, subject and auxiliary);

– control actions;

– evaluation actions;

2) *from the position of the object of activity*:
– transforming;
– research;
3) *in relation to mental activity (by mental processes)*:
– mental;
– perceptual;
– mnemic;
4) *by productivity ratio*:
– reproductive;
– productive.

Reproduction or productivity is determined by how they are carried out: according to given templates or according to independently formed criteria.

Each complex learning activity includes a large number of perceptual, mnemic and mental operations.

Due to the fact that they are not differentiated in the general group of learning activities, the teacher sometimes cannot accurately diagnose the nature of the student's difficulty in solving a learning task.

Control and evaluation, which turn into self-control and self-assessment, are also included in the structure of learning activities. The assessment allows you to determine to what extent the method of solving the problem has been mastered and to what extent the result of learning actions corresponds to their goal.

In school practice, the assessment process appears either in the form of a detailed judgment, in which the teacher justifies the mark, or in a collapsed form, as a direct marking. The teacher's assessment should serve as a basis for the formation of the student's self-assessment in learning activities.

For the teacher, it is not so much the analysis of the structure of learning activity that is of interest, as the problem of its adequate formation among students.

In fact, we are talking about teaching students how to learn, and this is often more important than arming them with specific subject knowledge.

12.2. The specifics of a university student's learning activity

The concept of student's activity is integral and includes its various types: learning (educational), scientific, social, sports, labor, etc.

The student's learning activity at university is specific in its goals, conditions, motives, and relationship compared to the same one at school. The features of students' activities include: originality of goals and results, systematic preparation for the performance of professional functions, mastering the necessary knowledge, skills, abilities, a combination of study and work; special tools of activity – books, laboratory equipment, full-scale and other models of future professional work, etc.; intensity of mental functioning, high intellectual and physical stress; situations that cause great mental tension (preparation for exams and tests, their passing, internship, etc.).

At the same time, the activities of students differ, on the one hand, from the activities of schoolchildren, and on the other – from the practical performance of professional functions. The main difference is that the students' activity is professionally directed, it becomes, in essence, an educational and professional activity.

A significant difference is also the strengthening of the role of professional motives of self-education and self-upbringing, which act as the most important condition for the disclosure of the capabilities and abilities of the student's personality, his professional development.

The students' activity in different courses has some special features: in the first year, the main emphasis is on familiarization with the future profession, mastering knowledge, skills, abilities, qualities of a specialist, entering the role of a student. The second year can be called a period of intensive study, since the difficulties of adaptation are over, students are included in all forms of educational work. In the third year there is an increase in specialization, active fulfillment of professional tasks, practice is mandatory; the fourth and fifth courses assume a real acquaintance with a professional role.

The students' activity has a specific internal structure: goals, motives, methods, it also includes cognitive processes, knowledge, skills, abilities, personal qualities, and through them, in turn, influence from other people, the team, and consequently, the teaching of various disciplines, leadership, upbringing work carried out at university, state requirements for specialists.

One of the most acute problems associated with the lack of formation of individual components of students' learning activity is the problem of its motivation. Motivation as a system of stable motives, having a certain hierarchy and expressing the orientation of the personality, is the leading factor in the regulation of activity and largely determines its success.

Learning and professional motivation is a special type of motivation and is determined by a number of factors specific to this activity: the educational system, the educational institution where the learning (educational) activity is carried out; the organization of the educational process; the subjective characteristics of the student (age, gender, level of development, level of claims, features of self-assessment, abilities, interpersonal interaction in the study group, etc.); subjective characteristics of the teacher and, above all, the system of his relations to the student and to pedagogical activity; the specifics of the academic subject.

At the moment, a large number of young people express a desire and have the opportunity to get a higher education. However, the motivation of students to enter a university varies.

Analyzing the motives for entering universities, it should be noted that often a low passing score is almost the leading one when choosing a specialty, external (non-specific) motivation prevails, many students, having spent some time at university, experience dissatisfaction and disappointment, consider the choice of specialty to be wrong, faculty, university and life path in general.

In the conditions of an educational institution, the lack of motivation to master a profession, due to the possible randomness and lack of awareness of its choice, the low prestige of the profession, can be partially compensated in the learning process by optimizing the educational process, introducing innovative teaching methods, improving the forms and methods of career guidance among school graduates, applicants, as well as demonstrating applied significance of the specialties offered by the university.

As noted above, learning (educational) motivation is determined by a number of specific factors, the development of which will contribute to the implementation of the tasks of forming educational and professional motivation as a necessary condition for successful training and effective professional self-implementation of a specialist in the future, therefore, the motivation of learning activities will depend on the effective development of these factors.

The conditions that contribute *to the formation of learning (educational) and cognitive motives* among students are known: awareness of the immediate and final learning goals; awareness of the theoretical and practical significance of the acquired knowledge; non-traditional forms of lectures; professional orientation in learning activities; the use of tasks that create problematic situations that require active search activity and allow students to show creative abilities.

The formation of learning motives is influenced by the style of pedagogical activity and communication of the teacher with students, different styles form different motives.

The authoritarian management style forms the "external" learning motivation, the motive of "avoiding failure", delays the formation of "internal" motivation. The democratic style, on the contrary, promotes "internal" motivation; and the permissive (liberal) style reduces the learning motivation and forms the motive of "hope for success". Also, the formation of motivation is significantly influenced by the relationships in the group, the socio-psychological climate. The psychological service of the university and the curators of study groups should carry out purposeful and systematic work to optimize relationships in the group, prevent conflicts, and develop group standards (norms) and values. High results of students' learning (educational) and professional activities and active participation in the social life of the university will ensure high-quality training of highly qualified specialists interested in the results of their work, mobile and self-confident, successfully implementing their creative potential.

12.3. Psychological aspects of modern concepts of learning (teaching) and organization of learning activities

The most complete and theoretically substantiated *possibilities of managing learning* (*educational*) *activities* are presented in the theory of P. Ya. Galperin. An external, material action, before becoming mental, internal, goes through a series of stages. The levels of mastery of mental action were described by B. G. Ananiev, N. A. Menchinskaya, A. R. Luria. P. Ya. Galperin developed the data of these researchers, creating his own **formation of mental actions theory**. Together with N. F. Talyzina, this theory was put into practice in the learning process. The formation of mental action, in their opinion, occurs in stages (gradually):

Stage I – motivational. Here the attitude of the subject to the goals and objectives of the upcoming action is formed, which creates the motivational basis for the action.

Stage II – formation of an indicative basis of action (IBA). It includes a preliminary acquaintance with what is to be assimilated, drawing up a scheme of IBA (there are systems of reference points and instructions, the consideration of which is necessary to perform the action). P. Ya. Galperin distinguished t*hree types of orientation in the task*: incomplete, specific IBA; complete, specific IBA; complete, generalized IBA.

Stage III – the formation of action in the material plan. This is a stage of external practical actions with objects, their images, diagrams, models.

Stage IV is *the stage of "loud speech",* all elements of the action are presented in the form of oral or written speech. Objects, diagrams, models are removed. Replacing specific objects with their verbal description provides a sharp increase in the degree of generalization of the action.

Stage V is the formation of an action in "external speech about yourself". There is a gradual disappearance of the external, sound side of speech. This stage differs from the previous one by a higher speed of execution and shortening.

Stage VI is the stage of mental action. The action is maximally reduced and automated. Its interiorization takes place, it becomes fully mastered.

The theory of gradual formation of mental actions makes it possible to stimulate intellectual development, improve the quality of formed actions and concepts, the student becomes the subject of his own educational activity.

The main provisions of the concept of **developing (developmental) learning** were formulated in the second half of the twentieth century. According to V. V. Davydov, in traditional pedagogical practice concepts are formed mainly on the basis of empirical thinking. At the same time, theoretical thinking is formed spontaneously and not for all students. Empirical thinking is a reflection of only external connections, in which it is difficult to comprehend the essence of phenomena. This type of thinking involves generalization by external signs, from the particular to the general, from the fact to the system. The assimilation of knowledge based on empirical thinking is carried out by comparing objects and phenomena, as a result of which common properties are distinguished in them. The means of fixing knowledge are words-terms.

Theoretical thinking is a reflection of the internal essential connections of objects and patterns of their development. This is scientific thinking based on the so-called meaningful generalization (from the general to the particular, from the abstract to the concrete, from the systemic to the individual). Knowledge arises on the basis of such a mental action as analysis. The means of fixing knowledge are the methods of mental activity.

The formation of theoretical thinking is carried out with the help of various sign systems (symbols, models, etc.). At the initial stage, training is aimed at the formation of generalized knowledge, on the basis of which, through deduction, the student is led to an understanding of specific phenomena in which certain general properties of objects are manifested.

In the 1960–70 years of the XX century teachers and psychologists (J. Bruner – in the USA, V. Okon – in Poland; M. N. Skatkin, I. Ya. Lerner, M. I. Makhmutov, A. M. Matyushkin and others – in Russia) began to develop a new direction in the learning (teaching) methodology, called problem-based.

Problem-based / Problem-solving learning is based on obtaining new knowledge through solving theoretical or practical problems by students. In this case, the problematic situation is considered as a special state of the subject, which marks the cognitive need to search for new knowledge or principles of action, to build new ways of it. A problematic situation arises if a person has a cognitive need and intellectual abilities to solve a problem in the presence of difficulties, contradictions between the known and the unknown. It occurs when a person lacks the available knowledge or known methods of action to realize something or perform any necessary actions.

The behavior of a student in a problematic situation is similar to the behavior of a scientist making a scientific discovery. With problem-based learning, the teacher does not communicate knowledge in a ready-made form, but sets a task for the student, awakening his desire to find the means to solve it. In this search, the student acquires new knowledge.

A. M. Matyushkin developed rules for creating problematic situations in the learning process; rules defining the sequence of problematic situations, and rules for managing the assimilation of knowledge in a problematic situation. *Problem-based learning includes several stages*:

– awareness of the problematic situation;

– formulation of the problem based on the analysis of the situation;

– solving the problem through the statement, change and verification of hypotheses and solutions.

V. A. Krutetsky identified levels and *criteria for problem-based learning*. Among the latter: the degree of theoretical preparedness of students and the readiness of the teacher to conduct problematic classes.

Consider the main *levels of problem-based learning* identified by V. A. Krutetsky:

1. *Problem-solving presentation of educational material* is a kind of preparation of students for problem-based learning. It is built in such a way that the teacher himself poses a problem and solves it by showing students a sample. With the help of various techniques, he activates their thinking: the teacher, drawing on the data of the history of science, the struggle of opinions around the issue under consideration, compares different points of view and shows a scientific solution as a result of their struggle. The greatest effect is achieved when it is possible to make students complicit in the solution. It is used: demonstration of experiments, films, posing questions and expressing various hypotheses by students before the start of the experiment.

2. *Partially-search (heuristic) method* provides for the inclusion of students in the search activity at its various stages: finding a problem, formulating hypotheses, formulating conclusions. By means of partial inclusion in the search activity, there can be a division of the general task into a number of subtasks and the solution of individual ones by students. At this level, the problem is solved under the guidance of a teacher.

3. Independent research activity – is an independent search and finding of a problem, its solution, carried out with the implementation of all elements of problem-based learning, at the highest level of cognitive activity:

– highlighting the problem;

– formulation of the problem;

– analysis of conditions, their assessment and separation of the known from the unknown;

– making hypotheses;

– development of a solution plan in one or more variants;

– implementation of the selected plan;

– checking the correctness of actions and the result obtained.

In the practice of teaching, the third level, as a rule, looks like this: the teacher poses a problem, equips students with the necessary tools to

solve it (bibliography, literature) and directs the search for a solution to the problem.

Significant results in the study and formation of students' learning activities were obtained in the works of V. Ya. Lyaudis. She believes that learning (educational) activity should be analyzed as a component of the learning situation, the system-forming variable of which is the social interactions of students with teachers and among themselves. The nature of these interactions, in turn, depends on the forms of cooperation between the teacher and the students. Joint learning (educational) activity is a kind of community that arises in the process of learning. In its formation, it goes through a number of stages, which, in the course of mastering the material, lead to the formation of a single semantic field for all participants of the training, which ensures further self-regulation of their individual activities. Of all the situations of joint learning (educational) activity, the central place is V. Ya. Lyaudis assigns joint productive activities arising from the joint solution of creative tasks.

A. A. Verbitsky pointed out that the main direction of students' education is contextual. In his opinion, the *business learning games (Game-Based Learning)* corresponds most fully to the idea of **sign-contextual learning (training)**. It can be defined as a sign model of professional activity, the context of which is also set by sign means (using modeling, imitation).

A. A. Verbitsky identifies the following *psychological and pedagogical principles that are implemented in the educational business game*:

– principles of simulation (imitation) modeling of specific conditions and dynamics of production and game modeling of the content of specialists' professional activity;

– principles of problematic content of the business learning games;

– the principle of joint activity of participants in the conditions of role interaction;

– the principle of dialogic communication and interaction of partners in the game;

– the principle of two-dimensional game learning activities.

Game forms of training provide not only the development of theoretical and practical thinking of a specialist, but also the development of managerial abilities, collective decision-making, skills and abilities of social interaction.

The knowledge, skills, and abilities acquired in training no longer act as a subject of learning (educational) activity, but as a means of professional activity.

The perspective of modern higher education is to focus on such training, in which the emphasis is shifted from the transfer of ready-made knowledge to the development of creative abilities, to the maximum mobilization of the creative potential of each student in mastering the educational material, the ability to apply knowledge in practice, that is, turning it into a genuine subject of the educational process. The solution of this problem becomes possible with the individualization of training based on the student's independent work, active forms of learning (teaching): special seminars and practical classes on issues of interest to students, discussions, modeling of production and practical situations, business learning games, etc.

12.4. Practical class

Questions for discussion

1. Learning activity as a special type of activity.
2. The specifics of a university student's learning activity.
3. Psychological aspects of modern concepts of learning (teaching) and organization of learning activities (theory of gradual formation of mental actions, problem-based/problem-solving learning (training), the concept of sign-contextual learning at university, etc.).
4. Development of students' creative thinking in educational (learning) activities. Stimulating the students' creative activity.
5. Formation of students' ways of educational (learning) activities in the information environment.

Practical tasks

1. Prepare a summary report on the psychological foundations of the analysis of the students' educational (learning) activities in higher educational institutions.
2. Using a variety of methods (observation, conversation, testing), make a description of the age and individual characteristics of the "difficult student".
3. Using a variety of methods, make a description of the age and individual characteristics of a gifted student.
4. Using the results of self-diagnosis of creativity, formulate recommendations for the development of creative abilities.

TOPIC 13. PSYCHOLOGICAL FOUNDATIONS OF PEDAGOGICAL ACTIVITY IN HIGHER EDUCATIONAL INSTITUTION

13.1. Goals and functions of a university teacher's pedagogical activity, its structure and content.

13.2. Communication in the "teacher-student" system.

13.3. Features of a university teacher's pedagogical mastery.

13.4. Peactical class.

13.1. Goals and functions of a university teacher's pedagogical activity, its structure and content

The teacher is the central figure in the university and the productivity of the educational institution, the efficiency of specialists' professional training depend on the content, quality and level of his pedagogical activity. **Pedagogical activity** is a teacher's professional activity aimed at solving the problems of development, education and upbringing of a student.

The university teacher's activity is multifaceted and includes both academic and extracurricular work. The teacher's academic work is connected with the classroom and extracurricular forms of teaching students.

Classroom types of work include: lectures, seminars, practical and laboratory classes. Extracurricular types of academic work include: consultations, tests, exams, management of course and diploma projects, practice management, control of independent work performed by students. The academic load is planned for each teacher in strict accordance with the staff schedule.

Extracurricular work of a university teacher consists of the following types:

1) educational and methodical work:

– preparation for lectures;

– preparation for practical and laboratory classes;

– development of educational and methodological complexes, training programs;

– development of the content of lectures on the new course;

– development of the content of seminars (practical) and laboratory classes;

– development of tests, tasks, control tasks;

– development of electronic training and methodological textbooks/ materials;

– preparation of questions for the current and final control;

– development and preparation for the publication of new textbooks;

– preparation for the publication (reissue) of methodological literature;

– editorial work;

– preparation of visual, multimedia materials for the educational process;

– implementation of rating control of students' knowledge;

– conducting and attending open classes;

– participation in the work of methodological commissions and councils of the faculty, university;

2) research work:

– implementation of planned state-budget and off-budget research work;

– participation in scientific conferences;

– preparation of monographs, scientific articles;

– participation in international, national and industry grants and projects;

– work on PhD and doctoral dissertations, scientific guidance of the research carried out;

– work as an opponent or scientific reviewer;

– scientific editing of scientific collections, scientific reports, etc.;

– management of a scientific group of students, undergraduates, postgraduates;

– management of the experimental site;

– preparation of students for participation in contests/Olympiads, competitions, scientific conferences, exhibitions;

3) upbringing (educational) work:

– work as a curator of an academic group;

– preparation and conduct of upbringing work in student groups (conversations, debates, etc.);

– work in a student dormitory;

– management of clubs, sections, etc.;

– preparation and participation in university-wide and faculty upbringing (educational) events;

4) organizational and methodological work:

– execution of orders of the rector's office, dean's office;

– preparation of reports for meetings of the Academic Council of the University, faculty Council, department;

– execution of department assignments, etc.

Thus, a university teacher's pedagogical activity involves the performance of several *functions*:

– *teaching* (the teacher translates knowledge, forms skills, abilities, causes students to take actions leading to the assimilation of educational material);

– *upbringing* (the teacher is called upon to cultivate high moral, mental, volitional, aesthetic and other professionally important qualities in students, takes care of the comprehensive development of their personality);

– *organizational* (the teacher maintains order and discipline in the classroom, monitors and evaluates the work of students, appoints consultations, etc.);

– *research* (the teacher conducts scientific research that enriches the academic disciplines he teachers with new conclusions).

These functions are perceived in unity, although for many teachers some dominate over others.

The main goal of the teacher's professional activity is the professional and personal development of the student. It is implemented by solving the following tasks:

– to create organizational and pedagogical conditions for the student to successfully acquire theoretical knowledge, general cultural, professional, special competencies within the framework of the main educational program;

– to form a system of knowledge among students about the natural connections of a person with nature, society, culture, the state; about the process of a human personality's formation; about ways of obtaining and interpreting scientific information, ways of its processing and storage, etc.;

– to form and develop the applied skills of future specialists in the field of their chosen professional activities;

– to develop the professional orientation of the student's personality, to ensure the formation of a general and professional culture;

– to develop students' research abilities, to form the skills of research activities;

– to promote the disclosure of the student's creative potential.

In the scientific and pedagogical literature, researchers distinguish a different number of functional components of pedagogical activity.

Considering the psychological structure of the teacher's activity in line with the theory of activity, it is possible to distinguish three main components in it:

1. Motives that encourage pedagogical activity. These are external motives, for example, the motive of achievement, and internal motives, for example, orientation to the process and the result of their activities. The external motives of the prestige of working in a certain educational institution, the motives of the adequacy of remuneration are often correlated with the motives of personal and professional growth, self-actualization.

2. Goals – the presented results of activities. They consist in preparing students for independent professional activity, in teaching, upbringing and forming in them the necessary knowledge, skills, abilities, personality qualities.

3. Operations as ways of carrying out actions to achieve the goals of upbringing and training of students.

The implementation of pedagogical activity includes a number of stages:

– clarification of the purpose;
– development of a plan to achieve the goal;
– preparation for action;
– action;
– analysis and evaluation of the action;
– reflection and coordination of follow-up actions.

In the process of carrying out pedagogical functions, an individual, characteristic for a given teacher, *style of activity* is formed – *a stable system of methods, techniques, due both to the specifics of the activity itself and to the individual psychological characteristics of its subject.*

Belarusian scientists N. A. Berezovin and Ya. L. Kolominsky conducted a study concerning the influence of the teacher's personality, his attitude to students on the formation of relationships between students in the classroom. As a result, the parameters were determined by which teachers were assigned to a certain type according to the style of pedagogical activity and attitude to the classroom staff: the teacher's personal characteristics (emotional-volitional traits and communication skills); the characteristic features of his behavior in the classroom; the nature of communication with students outside of lessons; features of speech influences, relationships with parents were analyzed.

According to these parameters, teachers were assigned to one of the *five teaching styles*:

1. The active-positive style is characterized by an emotionally positive orientation towards students and pedagogical activity, which is adequately implemented in the manner of behavior, speech influences and relationships with parents.

2. Passive-positive style is characterized by the fact that with a general positive orientation in the manner of behavior and speech influences, isolation, dryness, categoricalness and pedantry are found.

3. Situational style. Teachers who are characterized by this style show emotional instability: under the influence of specific situations, features of positive and negative styles are found in their behavior. Sometimes, with a general positive attitude towards students, their behavior is marked by irascibility, inconsistency, alternation of exactingness and liberalism, friendliness and hostility.

4. The active-negative style is characterized by a clear emotionally negative orientation, which manifests itself in harshness, irritability, focusing on the shortcomings of students, frequent remarks and punishments.

5. Passive-negative style. Teachers who adhere to this style do not so clearly show a negative attitude towards students and pedagogical work, but it is implemented in emotional lethargy, indifference, hidden hostility, dryness and alienation in communicating with students, indifference to their successes and failures, formalism in work.

Another classification of styles of pedagogical activity is offered by A. K. Markova and A. Ya. Nikonova. It is based on a meaningful characteristic of the style (the teacher's primary orientation to the process or result of his work), a dynamic characteristic of the style (flexibility, stability, switchability, etc.), a characteristic of effectiveness (the level of knowledge, skills and abilities of students, etc.).

1. Emotional and improvisational style. Teachers with this style of pedagogical activity are focused more on the learning process than the result. As a rule, they explain the material logically and interestingly, but there is often no feedback. They interview at a fast pace, ask informal questions, give students little to say, do not wait for them to formulate an answer on their own. They are characterized by insufficiently adequate planning of the educational process. Repetition and consolidation of material, control of knowledge are insufficiently represented in their activity.

2. Emotionally-methodical style. Teachers of this style are focused on learning outcomes. They are characterized by adequate planning of the educational process, high efficiency, step-by-step development of all educational material, tracking the level of students' knowledge. The consolidation and repetition of educational material are constantly presented in the activity. Teachers often change the types of work in the classroom, practice collective discussions, strive to activate students not by external attractiveness, but by the features of the subject itself.

3. Reasoning and improvisational style. This style of pedagogical activity focuses on the process and results of learning, adequate planning of the educational process. Compared with teachers of emotional styles of pedagogical activity, teachers with this style show less ingenuity in the selection and variation of teaching methods, are characterized by a not very high pace of work, speak less during surveys, giving students the opportunity to independently formulate their answer.

4. Reasoning-methodical style. It is characterized by a focus on learning outcomes, adequate planning of the educational process. Teachers show conservatism in the use of methods and tools of pedagogical activity. High methodicalness is combined with a standard set of teaching methods used. As a rule, the teacher gives students a lot of time to answer.

The individual style of pedagogical activity, characterized by low emotional involvement of the teacher and the effectiveness of his work, may be a consequence of the development of the *syndrome of "emotional burnout"*, which is understood as *a feeling of emotional emptiness and fatigue caused by his own work*. This syndrome includes three main components identified by Kristina Maslach:

1) emotional exhaustion;

2) depersonalization (cynical attitude to work and objects of one's work, negative communicative attitude);

3) reduction of professional achievements (the emergence of a sense of incompetence in their professional field, awareness of failure in it).

V. V. Boyko identified a number of external and internal factors that provoke "emotional burnout". The group of *organizational (external) factors* includes the conditions of the material environment, the content of work and socio-psychological conditions of activity, namely:

– chronic intense psychoemotional activity (intensive communication, the need to constantly reinforce it with emotions, carefully perceive,

strenuously memorize and interpret visual, audio and written information, quickly weigh alternatives and make decisions);

– destabilizing organization of activities (unclear organization and planning of the teacher's work, lack of equipment, poorly structured and vague information, the presence of "bureaucratic noise", excessive contingent standards, congestion, low wages);

– increased responsibility for executable functions and operations;

– unfavorable psychological atmosphere of professional activity;

– psychologically difficult contingent (teachers and educators have children with anomalies of character, nervous system, mental retardation).

The internal factors that cause "emotional burnout", according to V. V. Boyko are the following:

– tendency to emotional rigidity;

– intensive perception and experience of the circumstances of professional activity (characteristic of perfectionists, for "empaths");

– weak motivation of emotional return in professional activity;

– moral defects and disorientation of the personality.

T. V. Reshetova supplemented this group with five more factors:

– lack of emotion or inability to communicate;

– alexithymia, always associated with anxiety;

– workaholism, when there is a camouflage of any problem with work;

– people without social ties, with professional and economic instability, poor health, etc. Belonging to the female sex, age and long teaching experience can also be attributed to this group of factors.

It is possible to prevent the development of the "emotional burnout" syndrome in a teacher through continuous professional development and the development of psychological culture, rational organization of work and recreation, providing the necessary technical means of training, separation of work and personal life, switching, having hobbies, moderate physical activity, as well as self-regulation and psychocorrection of the developed state.

13.2. Communication in the "teacher-student" system

Pedagogical communication is defined as professional communication between a teacher and students aimed at the implementation of educational functions and psychological optimization of educational activities and relations between a teacher and students.

L. M. Mitina highlighted the main *functions of pedagogical communication*:

– information related to the exchange of cognitive and affective-evaluative information between the teacher and students;

– socio-perceptual, reflecting the peculiarities of perception and understanding by the subjects of the educational process of each other;

– self-presentation in the process of communication;

– interactive, related to the organization of pedagogical interaction;

– affective, involving the creation of a favorable psychological atmosphere in the classroom, the regulation of the emotional states of the subjects of the educational process.

The well-known psychologist V. A. Kan-Kalik distinguished *individual stylistic characteristics of pedagogical communication*:

1. Communication based on high professional attitudes of the teacher, his attitude to pedagogical activity in general. They say about such people: "Children (students) literally follow him around!" And in higher education, the interest in communication is also stimulated by common professional interests, especially in the major departments.

2. Communication based on a friendly disposition. It implies a passion for a common cause. The teacher performs the role of a mentor, an older friend, a participant in joint educational activities. However, familiarity should be avoided. This is especially true for young teachers, so as not to provoke conflict situations.

3. Communication-distance refers to the most common types of pedagogical communication. In this case, there is a constant distance in the relationship in all areas: in training, with reference to authority and professionalism, in upbringing, with reference to life experience and age. This style forms the subject-object relations.

4. Communication-intimidation is a negative form of communication, inhumane, revealing the pedagogical inconsistency of the teacher resorting to it.

5. Communication-flirting is typical for young teachers striving for popularity. Such communication provides only a false, cheap authority.

M. Talen chose the criterion of the teacher's professional position as the basis for classifying the *styles of pedagogical communication* (the choice of the role of a teacher based on his own needs, and not the needs of students):

Model I – "Socrates". This is a teacher with a reputation for being a lover of disputes and discussions, deliberately provoking them in the

classroom. He is characterized by individualism, unsystematic in the educational process due to constant confrontation; students strengthen the protection of their own positions, learn to defend them.

Model II – "Group Discussion Leader". This is a teacher who thinks that the main thing in the educational process is the achievement of agreement and cooperation. He assigns himself the role of a mediator, for whom the search for democratic consent is more important than the result of the discussion.

Model III – "Master". The teacher acts as a role model, subject to unconditional copying and, above all, not so much in the educational process as in relation to life in general.

Model IV – "General". He avoids any ambiguity, is emphatically demanding, rigidly seeks obedience, because he believes that he is always right in everything. According to the author of the typology, this style is most common in pedagogical practice.

Model V is a "Manager". A style that has become widespread in some foreign schools. The teacher strives to discuss with each student the meaning of the problem being solved, to quality control and evaluation of the final result.

Model VI – "Coach". The atmosphere of communication is permeated with the spirit of corporatism. Students in this case are like players of the same team, where each individually is not important as an individual, but together they can do a lot. The teacher assigns himself the role of the inspirer of group efforts, for whom the main thing is the end result, brilliant success, victory.

Model VII – "Guide". The teacher got used to the image of a walking encyclopedia. Concise, precise, restrained. He knows the answers to all the questions in advance, as well as the questions themselves. Technically flawless and that is why it is often frankly boring.

Analyzing the real work of teachers in the classroom and in extracurricular forms of educational activity in the same group, it is possible to distinguish different levels of communication. For example, a high level of pedagogical communication is characterized by warmth in relationships, mutual understanding, trust, etc., manifested in the form of the following types of influences used: approval, encouragement of independence, praise, humor, request, advice and suggestion. At a low level of pedagogical communication, alienation, misunderstanding, hostility, coldness, lack of mutual assistance are possible, the teacher uses remarks, irony, reproaches, threats, insults, etc.

Often, various researchers single out the *leadership styles* used by the teacher as a characteristic of pedagogical communication:

– *autocratic* leadership style, when the teacher exercises sole control of the educational team, not allowing them to express their views and criticisms, the teacher consistently makes demands on students and exercises strict control over their execution;

– *authoritarian* leadership style allows students to participate in the discussion of issues of academic or collective life, but the decision is ultimately made by the teacher in accordance with their own guidelines;

– *democratic style* involves the attention and consideration of students' opinions by the teacher, he seeks to understand them, convince them, not order them, conducts dialogical communication "on equal terms";

– *ignoring style* is characterized by the fact that the teacher strives to interfere as little as possible in the students' activities, practically eliminates the their management, limiting himself to the formal performance of the duties of transmitting educational and administrative information;

– *permissive* (*conformal*) *style* manifests itself in the case when the teacher is removed from the leadership of a group of students, letting everything take its course or goes about their desires;

– *inconsistent* (*illogical*) *style* – the teacher, depending on external circumstances and his own emotional state, implements any of these leadership styles, which leads to disorganization and situationality of the teacher's relationship system with students, to the appearance of conflict situations.

In real pedagogical practice, a combination of styles is most often observed, when one of them dominates. Different styles of communicative interaction give rise to several models of teacher's behavior in communicating with students.

The dictatorial model of Mont Blanc. The teacher seems to be detached from the students, he hovers over them, being in the realm of knowledge.

Students are just a faceless mass of listeners. No personal interaction. Pedagogical functions are reduced to an informational message.

Consequence: lack of psychological contact, which leads to the lack of students' initiative and their passivity.

Non-contact model "Chinese Wall". It is close in its psychological content to the first one. The only difference is that there is weak feedback between the teacher and the students due to an arbitrarily or

unintentionally erected communication barrier. The role of such a barrier may be the lack of desire for cooperation from any side, the informational rather than dialogical nature of the lesson; the teacher's involuntary emphasis on his status, condescending attitude towards students.

Consequence: poor interaction with students, and on their part – an indifferent attitude towards the teacher.

Model of differentiated attention "Locator". It is based on selective relations with students. The teacher is not focused on the entire audience, but only on a part (talented or, on the contrary, weak, leaders or outsiders). This part acts as a kind of indicators by which he is guided by the mood of the team. One of the reasons for this model of communication in the classroom may be the inability to combine the individualization of student learning with a frontal approach.

Consequence: the integrity of the act of interaction in the teacher–student team system is violated, it is replaced by the fragmentarity of situational contacts.

Hyporeflexive model "Black Grouse". The teacher works for himself in communication: his speech is mostly monologue. When talking, he hears only himself and does not react to the listeners in any way. In the dialogue, it is useless for the opponent to try to insert a remark, it simply will not be perceived. Even in joint work, such a teacher is absorbed in his ideas and shows emotional deafness to others.

Consequence: there is practically no interaction, the educational process is carried out formally.

Hyporeflexive model "Hamlet". This model is the opposite of the previous one. The teacher is concerned not so much with the content side of the interaction, as with how he is perceived by others. Interpersonal relationships are elevated by him to the absolute, acquiring a dominant meaning for him, he constantly doubts the effectiveness of his arguments, the correctness of his actions, reacts sharply to nuances of the psychological atmosphere in the audience, taking everything personally.

Consequence: acute socio-psychological sensitivity of the teacher, leading to his inadequate reactions to the remarks and actions of the audience. In such a model of behavior, it is possible that the reins of government will be in the hands of students, and the teacher will take a guided position in the relationships.

Inflexible response model "Robot". According to this model, the teacher's relationship with students is built according to a rigid program,

where the goals and objectives of the lesson are clearly maintained, methodological techniques are didactically substantiated, there is an impeccable logic of presentation and argumentation of facts, facial expressions and gestures are polished, but the teacher does not have a sense of understanding the changing situation of communication. He does not take into account the pedagogical reality, the composition and mental state of students; their age and ethnic characteristics. A perfectly planned and methodically worked out lesson breaks on the reefs of socio-psychological reality, without achieving its goal.

Consequence: low effect of pedagogical interaction.

Authoritarian model "I am myself (myself)". In this model, the educational process focuses entirely on the teacher. He is the main and only actor. Questions and answers, judgments and arguments come from him. The unilateral activity of the teacher suppresses any personal initiative on the part of students who are waiting for instructions for action. Their cognitive and social activity is reduced to a minimum.

Consequence: lack of initiative is formed, the creative nature of learning is lost, the motivational sphere of cognitive activity is distorted.

Active interaction model "Alliance". With this model, the teacher is constantly in dialogue with students, keeps them in a positive mood, encourages initiative, easily grasps changes in the audience and responds flexibly to them. The style of friendly interaction prevails with the preservation of the role distance.

Consequence: emerging educational, organizational and ethnic problems are creatively solved by joint efforts. This model is the most productive.

All the approaches presented above to the definition of styles of pedagogical activity and pedagogical communication, with differences in their names and features of the definition, can be characterized by two main indicators:

a) attitude to students and pedagogical activity in general;

b) the nature of the manifestation of this relationship.

A general analysis of the stylistic characteristics of pedagogical communication shows that it may not always be optimal. Problems arising in the process of real interaction with the student are expressed in communication barriers and pedagogical conflicts.

Difficulty in communication ("barriers") is a subjectively experienced state of "failure", complications, obstacles in the implementation of the planned communication. According to A. K. Markova, it manifests itself

in the form of a stop, interruption of activity or communication, the impossibility of their continuation. The difficulty can have both positive and negative functions. The positive function has two meanings – indicator and mobilising. Negative also has two meanings – restraining and destructive.

In pedagogical psychology, there are a large number of completely different approaches to determining the causes and types of "barriers" to communication. In general, the following *areas of difficulties in pedagogical communication* can be distinguished:

– ethno-socio-cultural (the reasons in this case may be violations of ethical norms of communication accepted in different cultures, etc.);

– status-positional-role (difficulties are caused by the different status of participants in the educational process, the difference in their rights and powers);

– individual psychological (for example, the factors of difficulties may be accentuations of character, introversion, emotional instability, etc.);

– age-related (the well-known "conflict of fathers and children");

– activity-based (caused, for example, by the fear of a pedagogical error, negative attitudes from past communication experience, mismatch of the teacher's and students' attitudes, inadequacy of pedagogical activity, the communicative situation developing in the classroom);

– the area of interpersonal relations (for example, semantic barriers, the barrier of lack of contact, etc.).

To prevent the development of difficulties in pedagogical communication, it is necessary to develop self-control, reflexive abilities, communicative culture, observation and the habit of analyzing the effectiveness of the interaction, avoiding stereotypes in activity and social perception. It is very important to establish initial contact with the audience (student). In case of difficulties, resistance to the requirements imposed on students, etc., you can use humor (you need to remember the pedagogical tact), a request for help, a non-stereotypical response to the situation, a demonstration of willingness to make concessions, techniques of "praise in advance" and maintain a positive attitude towards the student's personality. Difficulties that are not realized, are not analyzed by the teacher, and, therefore, are not overcome, can provoke conflicts.

In psychology, the very concept of "conflict", its structure, causes and varieties, dynamics of development, options for conflict interaction, conflict resolution, and the possibilities of managing it are studied in

conflictology. Analyzing the structure of the conflict, the following basic concepts (notions) can be distinguished: the parties (participants) of the conflict, the conditions of the conflict, images of the conflict situation, possible actions of the parties to the conflict, the outcomes of conflict actions.

In socio-psychological terms, participants in a pedagogical conflict are characterized primarily by motives, goals, values, attitudes, etc., the incompatibility of which often acts as the cause of the conflict. The images of a conflict situation available to its participants determine the set of possible actions taken by the parties. Since the actions of the opponents largely influence each other, in any conflict they acquire the character of interaction. In addition, the participants in the conflict have a certain image of possible outcomes from the very beginning and choose their behavior in accordance with this image.

A conflict pedagogical situation (according to A. S. Chernyshev) can be defined as a short-term interaction of a teacher with students (study group) on the basis of opposite standards (norms), values and interests, accompanied by significant emotional manifestations and aimed at restructuring the existing relationships (for the better or for the worse).

A. Ya. Antsupov, A. I. Shipilov distinguish the following *features of pedagogical conflicts*:

– the responsibility of the teacher for the pedagogically correct resolution of problematic situations, since any educational institution is a model of society where the standards (norms) of relations between people are assimilated;

– participants of conflicts have different social status (teacher-student), which determines their different behavior in the conflict;

– the difference in the age and life experience of the participants dilutes their positions in the conflict and generates a different degree of responsibility for mistakes in their resolution;

– different understanding of events and their causes by participants (the conflict "through the eyes of a teacher" and "through the eyes of a student" is seen differently);

– the presence of other students in the audience transfers them from the status of witnesses to the status of participants in the conflict, and the conflict acquires upbringing meaning for them as well;

– the professional position in the conflict obliges the teacher to take the initiative in resolving it and be able to put the interests of the student as a forming personality in the first place;

– every teacher's mistake in resolving a conflict creates new problems, situations and conflicts in which other participants are involved.

We can conditionally distinguish *three phases of conflict in pedagogical communication*:

1) conflict acute onset (beginning) with a clear violation of social standards (norms) and values by one of the parties to the conflict;

2) the opponent's response, on the form and content of which the outcome of the confrontation depends and, most importantly, its consequences for the previously established relations;

3) relatively rapid change of standards (norms) and values (sometimes up to the destruction of specific norms) in two different directions – improvement (constructive conflict) or deterioration of previously established relations (destructive). Constructive conflicts are characterized by disagreements affecting principled parties, problems, the resolution of which brings communication to a new, higher and more effective level of functioning and development. Destructive conflicts lead to negative and often destructive actions, which sometimes turn into slander, open hostility and other negative phenomena, which results in a sharp decrease in the effectiveness of pedagogical activity. *The resolution of the conflict situation should pursue the goal of transfering destructive conflicts into a constructive channel.*

In a conflict, it is very important to choose a strategy of behavior appropriate to the conflict situation. This choice is determined by the tactics by which the conflict participant is going to satisfy his own interests (acting passively or actively) and the interests of the other side (acting jointly or individually). Traditionally the following *conflict strategies* are distinguished:

– *rivalry (opposition, competition)* is expressed in the desire to achieve the satisfaction of their interests to the detriment of other people;

– *cooperation* when the parties to the conflict come to an alternative that fully satisfies the interests of both sides;

– *avoidance*, which is characterized by both a lack of desire for cooperation and a lack of tendencies to achieve their own goals;

– *adaptation*, meaning compliance as opposed to cooperation, sacrificing one's own interests for the sake of another;

– *compromise* implemented in the private achievement of the partners' goals for the sake of conditional equality.

Each of the strategies is efficient only in certain conditions, and none of them can be considered the best.

The strategy of cooperation seems to be the most promising, but it requires a lot of time to resolve the conflict and is unacceptable in conditions of strictly limited time. The advantages of cooperation are that it allows you to completely solve the problem, deal with all the needs of all parties to the conflict and choose the best solution that fully suits all parties. The disadvantages of this method are the large time costs and the inability in some cases to find a solution that fully satisfies all parties to the conflict.

Rivalry assumes maximum consideration of their interests and needs and is used when it is necessary to quickly resolve the problem in their favor. The advantage of this strategy is to identify the most dynamic participant. Examples of such a strategy are various contests and competitions. The disadvantages of rivalry include the loss of one or several, and sometimes all, parties to the conflict, a high level of tension and a possible rupture of any relationship between the parties to the conflict.

Avoidance is useful in cases where there is no time or opportunity to resolve the conflict immediately. The negative side of this strategy is that the conflict in the application of this strategy is not resolved.

Adaptation. The advantage of this strategy is the preservation of relations with the opponent. The disadvantages are the refusal to satisfy their interests and needs. This strategy is used when the individual has little chance of winning or when the situation is insignificant for the individual and it is important to maintain the relationship.

Compromise requires much less time and effort to resolve an issue that generally suits the parties to the conflict. Its disadvantages include incomplete resolution of the conflict, residual dissatisfaction of the parties who sacrificed any of their interests, in connection with which the conflict may arise again.

Psychological literacy of all subjects of the educational process, rational choice of behavior adequate to the situation will allow to build pedagogical communication in such a way as to avoid conflicts or resolve them as constructively as possible. The establishment of optimal pedagogical communication in the classroom is contributed by creating an atmosphere of security in the classroom when students communicate with teachers, encouraging initiative, activity in the classroom, demonstrating a positive attitude, a sense of humor, teaching communication techniques,

performance techniques, avoiding criticism or its positive nature, criticizing one's own mistakes as a demonstration of the standard of attitude towards them, etc.

An important role is played by the psychological and pedagogical competence of the teacher: analysis of the students' psychological characteristics, knowledge and ability to use various tools/means of communication, knowledge and consideration of the mechanisms and effects of social perception (first impression errors, social stereotypes, projection, etc.), etc. The achievement of a positive result of pedagogical communication depends on the level of development of the teacher's communicative skills, his observation, the ability to empathy and reflection, the ability to recognize difficulties in communication, manipulation and conflicts.

13.3. Features of a university teacher's pedagogical mastery

Pedagogical mastery is a high level of a teacher's professional activity. Externally, it manifests itself in the successful creative solution of a wide variety of pedagogical tasks, in the effective achievement of the goals of educational work.

From the inside, **pedagogical mastery** is a functioning system of knowledge, skills, abilities, mental processes, personality traits that ensures the fulfillment of pedagogical tasks. In this regard, pedagogical mastery is an expression of the teacher's personality, his ability to independently, creatively, professionally engage in pedagogical activity.

The inner side of pedagogical mastery includes:

1) knowledge, skills, abilities;

2) professionally important qualities of a teacher;

3) positive attitude to pedagogical work (interest and love for it);

4) pedagogical and organizational abilities;

5) character traits adequate to the requirements of the profession, manifestations of temperament, features of mental processes;

6) psychological readiness (long-term and situational) for activity.

The *knowledge* required by a university teacher can be divided into two groups. The first group: knowledge of their subject; psychological and pedagogical knowledge. The second group: knowledge of the theory of management and management of the educational process at university;

knowledge of related scientific disciplines; knowledge of the main achievements of science and technology, literature and art.

The teacher's *skills* are automated components of his pedagogical activity, actions that have reached a high degree of perfection and do not require special efforts and concentration of attention in their implementation. The most important teacher's skills are:

– the skills of studying students, their activities, states and qualities, relationships in teams, successes, achievements, difficulties, mistakes in studies, etc. These include the skills of observing the behavior of the audience and individual students, the external expression of attention, fatigue, interest, etc.;

– skills in preparing and conducting various forms of classes (skills in studying literature, composing and using notes, distributing attention, estimating time, etc.);

– speech skills (constructing phrases, freely using expressive means of language, pronunciation, accents);

– management skills of students' collective and individual activity (management of attention, thinking, mental states), organizational skills (maintaining discipline, assignment of tasks, etc.);

– skills of highly cultured external behavior (possession of posture, gestures, facial expressions, eye expression, pedagogical tact in teaching, etc.).

The teacher's abilities are manifested in the correct use of knowledge and skills, especially in new and complex pedagogical situations. Abilities allow, on the basis of acquired knowledge and skills, to perform certain types of activities in changing conditions. The main teacher's *abilities* should include:

– the ability to transfer knowledge, intelligibly present the material, monitor and evaluate the results of students' activities and their own work;

– the ability to form the students' skills, qualities, to take into account their individual and other characteristics;

– ability to manage students' mental activity, organize their independent work and self-education;

– the ability to control oneself, one's mental state, the external expression of emotions and feelings, to show pedagogical tact, etc.

The most important element of pedagogical mastery is the humanistic orientation of the teacher's personality, which manifests itself in the desire to achieve the goals of teaching and upbringing at university together with students, in the teacher's commitment to personal-developing educational technologies.

Pedagogical technique is a complex of abilities and methods of personal influence (verbal and non-verbal) of the teacher on the student. The pedagogical technique includes:

– the ability to manage yourself (your own body, your emotional state, speech technique);

– the ability to interact with other people in the process of solving professional and pedagogical tasks (didactic, organizational, communicative skills; mastery of the technique of contact interaction; mastery of the technique of nonverbal communication).

As criteria for determining the level of development of pedagogical abilities of a teacher, we can distinguish:

a) productivity of activity (by result);

b) optimality (in the choice of tools);

c) creativity (in terms of content).

In accordance with these criteria and certain indicators, the following abilities levels of a university teacher are distinguished.

Pedagogical skillfulness is the simplest and most necessary step for everyone. The teacher must possess a set of such pedagogical skills as diagnostic, design, constructive, organizational, communicative, reflexive, etc.

Pedagogical mastery – this is a teaching and upbringing skillfulness brought to a high degree of perfection, which reflects the special refinement of methods and techniques of applying psychological and pedagogical theory in practice, thanks to which the high quality of the educational process is ensured.

Pedagogical creativity is a pedagogical activity containing a certain novelty associated with the modification of methods of educational or upbringing work, their modernization.

The highest level of teacher's professional activity is **pedagogical innovation** – the introduction of innovations in educational or upbringing activities (new principles and forms, methods and techniques) that significantly improve the quality of the educational process.

The main directions and forms of improving a university teacher's pedagogical mastery are: systematic professional development; internships in leading universities of the country and abroad; study, generalization and analysis of the experience of pedagogical activity of individual teachers; mutual visits and analysis of training sessions; methodological seminars, etc.

13.4. Practical class

Questions for discussion

1. Goals and functions of a university teacher's pedagogical activity, its structure and content.
2. Types, levels and criteria for evaluating pedagogical activity. Professional reflection of pedagogical activity.
3. Communication in the "teacher-student" system. Methods and means of organizing constructive communication.
4. Features of a university teacher's pedagogical mastery. The creative potential of the teacher and its development in the process of self-education.
5. Teacher's pedagogical culture, ethics and aesthetics of pedagogical work.
6. Prevention of stress, chronic fatigue and professional burnout in teaching activities.

Practical tasks

1. Prepare an essay on the one of the following topics: "Conditions and criteria characteristics of effective psychological and pedagogical interaction of subjects of the educational process", "Moral code of a higher school teacher", "Pedagogical mastery of a higher school teacher".
2. Diagnostics of the peculiarities of the teacher's communicative behavior ("Test to identify trends in pedagogical communication styles" by O. N. Bocharova, "Self-assessment of empathic abilities" (Yu. M. Orlov and Yu. N. Emelyanov) and "Self-control in communication" (M. Snyder)).

Test to identify trends in pedagogical communication styles
(by O. N. Bocharova)

Instruction. As you go through each of the test questions, mark it with a "+" symbol if you agree with us, and a "–" symbol if you give a negative answer. The degree of reliability of the test results also depends on the degree of objectivity of the answers.

1. Do you need a thorough preparation of the lesson, even on a repeatedly covered topic?
2. Do you prefer logical narrative to emotional storytelling?

3. Are you worried before you come face to face with the class?

4. Do you prefer to be at the teacher's table while explaining the educational material?

5. Do you often use methodological techniques that have been successfully applied by you before and have produced positive results?

6. Do you follow a pre-planned lesson plan?

7. Do you often include in the course of the lesson examples that have just come to mind, illustrate what was said with a fresh case that you witnessed yourself?

8. Do you involve students in the discussion of the topic of the lesson?

9. Do you strive to tell as much as possible on the topic, regardless of the faces of the listeners?

10. Do you often manage to make a good joke during the lesson?

11. Do you prefer to explain the educational material without looking up from your notes (notebooks)?

12. Do unexpected audience reactions (noise, buzz, animation, etc.) among students throw you off balance?

13. Do you need a sufficiently long time (5–8 minutes) to establish a broken contact and again attract the attention of students?

14. Do you raise your voice, do you pause if you feel inattention from students during the lesson?

15. Are you trying to answer a polemical question yourself?

16. Do you prefer to be asked questions by students in the course of explaining the educational material?

17. During the lesson, do you forget about who is listening to you?

18. Do you have a habit of choosing two or three faces among the students in the class and monitoring their emotional reactions?

19. Do the skeptical smirks of students unsettle you?

20. Do you notice changes in the students' mood during the lesson?

21. Do you encourage students to engage in dialogue with you while explaining the topic of the lesson?

22. Do you respond immediately to the students' remarks?

23. Do you use the same gestures to reinforce your phrases regardless of the situation?

24. Do you get carried away with monologue so much that you do not have enough time allotted according to the lesson plan?

25. Do you feel so tired after lessons that you are not able to repeat them again on the same day (in the second shift)?

Processing of results

Count the number of positive and negative matches according to the key below and determine your trend. If the total amount of matches is 80 % of all items on one communication model, you can consider the identified trend to be stable.

Communication models / Question No.	**Yes "+"**	**No "–"**
Dictatorial "Mont Blanc"	4, 6, 11, 15, 17, 23	1, 7, 8, 9, 12, 13, 14, 16, 18, 19, 20, 21, 22, 24
Contactless "Chinese Wall"	9, 11, 13, 14, 15	1, 7, 8, 12, 16, 18, 19, 20, 21
Differentiated attention "Locator"	10, 14, 18, 20, 21	2, 4, 6, 13, 15, 17, 23
Hyporeflexive "Black Grouse"	9, 11, 15, 17, 23, 24	8, 12, 16, 19, 20, 21, 22
Hyperreflexive "Hamlet"	3, 12, 14, 18, 19, 20, 22, 25	2, 5, 6, 11, 13, 23
Inflexible response "Robot"	1, 2, 5, 6, 13, 15, 23	7, 8, 9, 11, 16, 21, 24
Authoritarian "I am myself (myself)"	5, 10, 14, 15, 18, 24	2, 8, 16, 21
Active interaction "Alliance"	7, 8, 10, 16, 20, 21, 22	1, 2, 4, 5, 6, 11, 13, 15, 17, 23

If we consider communication styles in the perspective of two options: "friendly disposition" or "flirting", then in the dyad "teacher-student" we can distinguish such communication models as (O. N. Bocharova):

The dictatorial model of Mont Blanc. It is expressed in detachment from students, who for the teacher represent a faceless mass of listeners. Pedagogical functions are reduced to an informational message. The consequence of such a model is the occurrence of psychological discomfort or a complete lack of contact.

The "Chinese Wall" model. It is expressed in a weak relation between the teacher and the students due to the lack of desire to cooperate. The contact is established to emphasize the teacher's status, so

students have no interest in the subject and there is an indifferent attitude to the teacher's personality.

Model of differentiated attention "Locator". It is expressed in a selective attitude towards students. The teacher focuses on certain students: talented, weak, etc. This model arises due to an incompetent combination of an individual approach with a frontal method of teaching. As a consequence, situational contact and disruption of interaction in the "teacher-student" system are dominant.

Monoreflexive model "Black Grouse". The teacher is self-contained. His speech is monotonous, there is no reaction to the listener. Hears only himself, does not allow students to enter into a discussion. The consequence of this model is the formation of a logical vacuum. The educational impact is of a formal nature, since the participants of communication are isolated from each other.

Hyperreflexive model "Hamlet". It is important for a teacher how his information is perceived by students. Interpersonal relationships are elevated to the absolute, so the teacher constantly doubts the correctness of his behavior, permanent tension leads to a nervous breakdown, which is expressed in inadequate reactions to the actions of students.

Inflexible response model "Robot". Communication is built according to a rigid algorithm, there is an impeccable logic of presentation of the material, but at the same time the teacher does not take into account the situation and the mental state of his students.

Authoritarian model "I am myself (myself)". The learning process focuses on the teacher. The basis of communicative behavior is suppression, the consequence is the lack of students' initiative.

Active interaction model "Alliance". This is a model of friendly interaction and a positive mood

Self-assessment of empathic abilities
(by Yu. M. Orlov and Yu. N. Emelyanov)

Instruction. Answer "Yes" or "No" to the questions below. For "Yes", circle the letter **Y** to the right of the question; for "No", circle the letter **N**.

Question	1	0
It upsets me when I see someone feeling lonely among people	Y	N

Question	1	0
People exaggerate the sensitivity of animals and their ability to feel	Y	N
I hate it when people openly show their feelings	N	Y
What annoys me about unhappy people is that they always feel sorry for themselves	N	Y
I also get nervous if someone is nervous next to me	Y	N
I think it's stupid to cry with happiness	N	Y
I take the problems of my friends or girlfriends to heart	Y	N
Sometimes a love song really touches me	Y	N
I am very worried if I need to tell people unpleasant news for them	Y	N
The people around me strongly influence my mood	Y	N
Most of the foreigners I met seemed to me cold and unemotional	N	Y
I prefer professions that require communication with people	Y	N
I don't get too upset if my friends or girlfriends are acting wrong	N	Y
I like to see people accept gifts	Y	N
Lonely people are often unfriendly	Y	N
I get upset if I see a crying person	Y	N
Listening to some tunes, I feel happy	Y	N
When I read a novel, I get so worried, as if all this is really happening	Y	N
I'm always angry if I see someone being mistreated	Y	N
I don't really worry even when some people around me are crying	N	Y
If my girlfriends or friends start discussing their problems with me, I try to turn the conversation to another topic	N	Y
When I go to the cinema, I wonder why many viewers take films seriously, cry and sigh	N	Y
Someone else's laughter does not annoy me, people often laugh senselessly at all	N	Y

Question	1	0
When I make a decision, I don't care about other people's feelings about it	N	Y
I lose my mental balance if others are oppressed by something	Y	N
It's hard for me to see how people often get upset over trifles	Y	N
I get upset when I see animals suffering	Y	N
It's pretty stupid to worry about what's going on in books	N	Y
The helplessness of old people depresses me	Y	N
Other people's tears cause me more irritation than sympathy	N	Y
I like to worry about the fate of movie characters	Y	N
Sometimes I notice that I can be indifferent to the worries of others	N	Y
It seems to me that young children most often cry for no reason	N	Y

Processing of results

Count the number of circled letters in the right column (below number 1). This is your final score. Now you can turn to interpretation.

0–11 points – low level of empathy. You are quite a harsh and tough person. With great skepticism, treat all sorts of experiences, veal tenderness and crocodile tears. Try to keep your emotions in check and do not welcome the violent expression of feelings by others. At work, you prefer formal communication. You can be an excellent master of interpersonal relations (namely, pedagogy belongs to such professions), it will be difficult for you to gain the trust of the interlocutor. Most people are a little or much more sensitive than you, and you may seem cold and insensitive to them. If you want to increase the degree of your influence on others, you should think about the fact that human feelings and weaknesses are an excellent basis for finding a common language between people.

12–22 points – average level of empathy. Nothing human is alien to you, you know how to laugh and cry, you know how to share feelings with others. People consider you to be a moderately emotional person

who understands other people's problems. At the same time, you feel what is worth and what is not worth your worries and never allow yourself to go crazy over nonsense. Your emotional warmth and balance are a great base for successful work with people.

23–33 points – high level of empathy. Sometimes it seems to you that you see "tears invisible to the world". Other people's joys and sorrows are the same for you as your own. Your sensitivity and vulnerability, allowing you to understand other people without words, can also serve a bad service. Emotionally responding to all other people's problems, you follow the path of "professional burnout", acquire various somatic diseases and neurotic problems. Constantly working with people, you need to acquire adequate forms of protection from emotional stress, develop self-regulation skills, work out ways to constructively experience the most common problems. Although in general your "thin skin" makes you a very pleasant interlocutor, people love you and trust you.

Self-control in communication (by M. Snyder)

Instruction. Read carefully the ten statements describing reactions to certain situations. You must evaluate each of them as true or false in relation to yourself. If the sentence seems to be true or mostly true, circle the letter **T** to the right of the sentence. If it seems to be false or mostly false – the letter **F**.

Statement	1	0
I find it difficult to imitate the habits of other people	F	T
I could probably make a fool of myself to attract attention or amuse others	T	F
I could make a good actor	T	F
Other people sometimes think that I am experiencing something deeper than it really is	T	F
I rarely find myself in the center of attention in the company	F	T
In different situations and communication with different people, I often behave in completely different ways	T	F

Statement	1	0
I can only stand for what I sincerely believe	F	T
In order to succeed in business and in relationships with people, I try to be the way they expect me to be	T	F
I can be friendly with people I can't stand	T	F
I'm always the way I seem	T	F

Processing of results

Count the number of circled letters in the right column (below number 1). This is your final score. Now you can turn to interpretation.

0–3 points – you have low communication control. You are principled and straightforward and proud of it. You do not consider it necessary to "adapt" to anyone or anything. You are sincere and reliable in communication. Many people love you for this. However, some consider you to be an "inconvenient" and "undiplomatic" person. This can become an obstacle when working in a team, especially in a women's one, where, as you know, personal relationships mean a lot.

4–6 points – you have average communication control. You are quite sincere and at the same time "careful in your expressions". You usually have no problems in communication.

7–10 points – you have high communicative control. You agree with the phrase "All the world's a stage, and all the men and women merely players". You react flexibly to changes in the situation, feel well the impression you make on others, and sometimes like to "play along". You know perfectly well where and how to behave. Professional communication is not a problem for you, but when it comes to deep relationships, sincerity and self-disclosure, you feel that you are uncomfortable without the usual roles and masks.

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ШЕРШНЁВА Татьяна Викторовна
ВЕРЕМЕЙЧИК Ольга Валерьевна

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