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# **PEDAGOGY**

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Science and education of the Republic of  
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decided to publish it as a textbook.*

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**Dedicated to the 100th anniversary of the  
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**F.Rustamov, F.Karimova, S. Rustamova. Pedagogy.  
Bakı, "Elm və təhsil", 2022, 388 p.**

The textbook covers theoretical issues of pedagogy, didactics, theory of education, and school management.

The textbook is intended for students in English departments of higher pedagogical schools which train teachers.

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## INTRODUCTION

The dynamism inherent in our time increases the demands to improve and modernize schools' teaching and educational work. The science of pedagogy develops and offers new technologies to schools to meet these requirements, to increase the efficiency of the pedagogical process. The reviewing of educational literature on pedagogy in Azerbaijan has been started since the 1920s. The establishment of the first higher pedagogical educational institution in Azerbaijan—the Higher Pedagogical Institute (present ASPU) and the expansion of the network of pedagogical schools accelerated this work. In the 1920s, textbooks and manuals on pedagogy in Azerbaijan were developed on the basis of mainly European scientific and pedagogical literature, and since the 1930s based on Russian scientific and pedagogical literature. This is natural, so pedagogy is a secular science and it is not an Azerbaijani phenomenon. To compile more perfect books of pedagogy, even now, qualified teachers must know the pedagogical theories and technologies formed in the world and use them creatively.

In recent years, pedagogical books have been published in Azerbaijan which significantly differs according to the structure and content. But all these books are published in Azerbaijani language.

In the last few years, in our higher pedagogical schools, qualified teachers are trained to teach subjects in English in Azerbaijani schools. There have been created experimental groups at ASPU by prof. *Jafar Jafarov's* order No 3/154 "The establishment of experimental groups at ASPU," dated October 4, 2019. The purpose for creating english groups at the faculty of primary education was to improve the quality

of training pedagogical staff, create a different environment in the education system, prepare educated, competent (skillful) students and provide qualified preparation of teacher cadre that meet the modern requirements. So, a competition was held among the students in the first academic years of the 2019/20 and 2020/2021 and an English group of 15 students was created by the foreign language skills and mathematical abilities. Due to the successful outcome of the experimental group, 15 students were admitted to the English section of primary school teaching and 15 students to the English section of mathematics teaching through the State Examination Center. Although qualified teachers are prepared to teach subjects in English in other higher pedagogical schools, there was no book on pedagogy written in English. This book serves to fill that gap. In our opinion, the subject of “Pedagogy” should be taught in English in the specialty of English language teaching.

The structure, content, and rules of compilation of textbooks and manuals in pedagogy, published in the Azerbaijani and Russian languages have been seriously considered throughout writing process of this book. It was exposed that there is no textbooks or manuals that could meet the modern requirements and reflect all the problems of theoretical pedagogy. This book fundamentally differs from previous textbooks and manuals in structure, theme and modernity.

The textbook materials of “Pedagogy” (2017) by prof. Amrulla Pashayev and prof. Farrukh Rustamov have been mostly used in preparation of the book.

This textbook includes many additional materials on some topics that are not covered in the previous textbooks mentioned above.

The book is intended for use in English departments of universities that train teachers.

## CHAPTER I

### SUBJECT AND FUNCTIONS OF PEDAGOGY

#### *1.1. Formation of pedagogical science and development*

**Pedagogy** as a science is derived from the Greek word "paidagogos" "paidos" - "child" and "gogos" – "leader", therefore the word "pedagogy" is related to the act of leading a child. However, this leader was not a "teacher", but a slave. In Ancient Greece, slaves took rich male children to school in the morning and then back home again in the afternoon and they were called pedagogue. Later, this word has taken on a broader meaning; namely, education, upbringing, teaching and development of the child, and has been developed as a scientific notion in the form of pedagogy.

Pedagogy is a science that studies the laws of the transfer of social experience by older generations and the active assimilation of this experience by younger ones.

The object of pedagogy is a man who develops in the process of education and emerging relationships.

Human is studied in the fields of psychology, sociology, ethics, aesthetics, anatomy, and many of other sciences. But what's the difference? The difference lies in the subject of these sciences. In other words, psychology studies the psychological features of human, aesthetics examines human's attitudes toward beauty, anatomy learns the structure of human body and the features of their development.

The subject of pedagogy is educational activities and relationships that affect human development. The subject of pedagogy is education and teaching of human. Thus, we can say that pedagogy is the science of human and their upbringing. Also, this is the object of pedagogy. In other words, pedagogy studies the issues of teaching, upbringing, education, and mental development of people.

As a scientific discipline, pedagogy studies the theoretical foundations of pedagogical activities aimed at the harmonious development of human. Its primary purpose is to reveal the regularities of the pedagogical process. Thus, pedagogy is the science of teaching, upbringing and education of a growing generation.

Pedagogy is one of the most ancient sciences. Throughout the history of society, the formation and development of folk pedagogy have taken place. Gradually, people who associated with teaching and education began to be called pedagogues. The generalization of the accumulated pedagogical experience gave an impetus developing pedagogy as a separate science, which was originally part of philosophy.

It is one of the unusual sciences. The peculiarity of pedagogy is that, **firstly**, it is an extremely complex science, possibly the most complex of all sciences. There is no need to prove this particularly because human is the nature's greatest and highest achievement. Naturally, a science that deals with education's theoretical and practical aspects in an organized way cannot be an ordinary science. **Secondly**, pedagogy is a very contradictory, dialectical science. It is constantly developing because human society itself is growing. Science, which studies human education's theoretical and practical aspects cannot fall behind this development. **Thirdly**, pedagogy is a science with a vibrant theoretical and useful material. It comes from the legacy that the mankind has

created throughout history. *Lastly* and *fourthly*, pedagogy is exciting subject. Not only because its subject is human education, technology, and the system of relations in the educational process. And also because pedagogy is interesting with its history of development, innovations and many mistakes.

Pedagogy studies social phenomena. Pedagogy is included in social sciences. No matter how undulating the development path of any science may be, it is shaped under the influence of society's needs and fulfills certain social functions.

Pedagogical knowledge, which is a field of human knowledge, is ancient and inseparable from the development of society. This knowledge belongs to a specific field of human activity related to preparing of the growing generation for life and their education and upbringing. Since ancient times, every senior member of society has been a teacher in everyday life conditions, to express it in modern terms. Scientists who studied the socialization of children in primeval community, believe that at that time, education was provided in the process of social and production activities. Therefore, education was carried out in life, in a complex way and without interruption. Primeval people considered the birth of a child as a physical act, and undertook to educate the child to raise him to the level of social development and even conducted "tests" to check the child's level of readiness for life. The progress of humankind became possible because the new generation acquired the production, social and spiritual experience of previous generations and passed it on to the new generation, enriching it. Education laid the foundation of the existence and development of human society.

Due to the further development and complication of the

production, the volume of scientific knowledge has increased, the preparation of the growing generation has become more critical, and the need to carry out educational work in a specially organized environment has been aroused. Education has become an essential need of society and an important condition for its development. As a result, educational work has been separated as a special public function, i.e., special educational institutions – schools, and specialists – teachers who taught children have emerged.

Despite the intensive development of educational theory, until the XVII century, pedagogy, like several of other sciences, was an integral part of philosophy. Any field of human knowledge can become a science only if its specific subject of research is sufficiently precise and concrete. In this sense, J.A.Comenius (1592-1670) greatly contributed to the development of pedagogy as an independent field of theoretical knowledge for the first time. For this, there was already a rich pedagogical heritage, public demand, and advanced pedagogical experience. Therefore, in the modern pedagogical world, J.A.Comenius is considered the founder of the science of pedagogy.

Thus, pedagogy separated from the system of philosophical knowledge and became an independent field of science in the XVII century. In subsequent years, different views arose on the status of pedagogy. According to researchers, pedagogy is a relatively independent field of knowledge and the assimilation of information from other sciences. Nevertheless, traditionally, three main areas of knowledge – natural, social and thinking sciences have been in the center of attention in building a model of a scientific knowledge system. The sciences of pedagogy, medicine and technical studies were not included in the triangle of nature-society-thinking.

Intensive solution of theoretical problems, formation of subject methodologies, and research on methodological issues allowed pedagogy to restore its rights as a science. In the 30s-40s of the XX century, pedagogy was already accepted as both theoretical and applied science.

Pedagogy draws some ideas from other sciences, but it is based on its theoretical research. Theoretical pedagogy is a basic science for all disciplines included in the system of pedagogical sciences. The scientific and theoretical basis for all of them is modern theoretical pedagogy.

Pedagogy is a social science. Pedagogy is related to the ideology and policy of the state. The influence of the ideology and policy of the state on pedagogical science, educational institutions do not deny universal human values. Education itself belongs to universal human values. Therefore, the talks about the depoliticization and de-ideologization of pedagogical science and activity of the education system are baseless. This is nothing but a distortion of the essence of the educational functions of society, the state, deliberately misleading its scientific and practical activities. If there is a society, a state, it has an education system, and the content of their work must have elements of politics and ideology.

There are different views on the subject of pedagogical science. Some consider upbringing, and some consider the pedagogical process as a subject of pedagogical science. In our opinion, the subject of the science of pedagogy is *education*.

There is a system of events that determine the upbringing, development, and formation of personality in the educational institution's targeted activity. Since these events are directly related to getting education, they were given a common name

- the name of education. There is reason to say so because the ultimate goal of all types of educational institutions is to provide education and the relevant document to confirm this process.

***Education is the result of the level of mastery of the content determined following modern standards in educational institutions and self-education, verified, evaluated, and established in legal documents. Its purpose is to develop the intellectual and emotional spheres of individuals to the benefit of society and the state, and prepare them for life.***

This broad definition of education can be divided into the following parts:

1) education is given to the benefit of society and the state to develop the intellectual and emotional spheres of personality, preparing it for life;

2) the content of education is determined following the modern standards;

3) the content of education is mastered in educational institutions and through self-education;

4) the level of learning is verified and evaluated on the basis of accepted criteria;

5) the educational process ends with the issuance of certain legal documents. In the Law of the Republic of Azerbaijan "On Education", education is given as a process of acquiring systematized knowledge, skills, and abilities and their results.

Pedagogy studies not only the problem of education but also philosophy, sociology, psychology, economics, political science, and other sciences.

Education is a social phenomenon, and many fields of science should be involved in its research. But these sciences do not touch on the essence of education, daily education of

human development, interaction of teachers and students in this development process, and other aspects. Because it is up to pedagogy to study these aspects of education. Pedagogy develops the theory and technology of education, as well as strategies and tactics of their interaction.

Like any other field of science, the science of pedagogy combines two parts in itself: What has it learned? What should it learn? There is a continuously changing boundary between these two parts. The pedagogical theory is the end and result of human scientific activity. Theory reflects a definite part of science. Pedagogy has traditionally been divided into four sections:

1. *General bases of pedagogy.*
2. *Didactics (theory of education and teaching).*
3. *Theory of upbringing.*
4. *School studies.*

About the functions of pedagogy. Its subject determines the functions (tasks) of pedagogy as a science. These functions are divided into two parts:

- 1) theoretical functions;
- 2) technological functions.

Pedagogy performs its theoretical and technological functions in unity. Pedagogy performs its theoretical and technological functions in concert.

**Theoretical functions are implemented at three levels:**

**1. Descriptive and explanatory level.** This is the study of advanced pedagogical practice.

**2. Diagnostic level.** This intends to light the situation of pedagogical activities, the effective activity of teachers and students, the conditions and reasons that create them.

**3. Prognostic level.** It intends to study pedagogical reality and built a model of change of existence based on it. The

prognostic level of the theoretical function of pedagogy is related to revealing the essence of pedagogical events, finding events in the depths of the pedagogical process, scientifically substantiating the proposed changes.

At this level, a model (example, stencil, standard) of educational theories and pedagogical systems is created, which precedes educational practice.

The *technological function* of pedagogy happens at three levels:

**1. Project level.** It includes working out curricula, programs, textbooks and teaching aids, pedagogical recommendations, etc. These materials are compiled on the bases of theoretical concepts and determine the plan of the pedagogical activity, its content, and character, norm, or regulator.

**2. Changer level.** At this level, the achievements of pedagogical science are applied to improve and restructure the educational practice;

**3. Reflexive (involuntary, unusual) and corrective level.** This level intends to assess the impact of research results on educational practice, and then to correct the interaction between scientific theory and practice.

### ***1.2. The system of pedagogical notions***

Pedagogy describes and explains the events and processes related to its subject, and makes scientific generalizations with the help of its notions. The basic notions of pedagogy – *education, upbringing, teaching* are sometimes considered as its categories. There is no consensus among researchers on this matter. In our opinion, it is correct to say “notions” because they change in the course of time according to several parameters. But the categories are almost unchanged.

For example, time, space, and other categories of philosophy. Pedagogy makes extensive use of general scientific notions such as *development* and *formation*, and recently the notion of *pedagogical technology*.

In pedagogy, the notion of *upbringing* is expressed as follows: **upbringing is a process of purposeful and organized formation of personality**. At present, in some educational literature, education is still used in a broad and narrow social sense and a broad and narrow pedagogical sense. Some researchers rightly oppose such ambiguity and defend the idea that scientific notions have the same meaning.

One of the main notions of pedagogy is teaching. Teaching is a purposeful and controlled, guided interaction of teachers and students in a specially organized process. According to the purpose of teaching, it serves the acquisition of knowledge, skills and habits of students, the development of mental abilities and potential, the strengthening of self-study skills, the formation of their outlook. Teaching is an educational process. In the process of teaching, students master scientific knowledge, acquire certain skills and habits. In addition to giving education, teaching has an educative, developmental, formative, and supervisory function.

*Formation* is the formation process of man as a social individual being under the influence of ecological, social, economic, ideological, psychological and other factors. Organized education and upbringing are one of important factors in the formation of personality.

*Development* is the process of quantitative and qualitative changes in the human body and its results. Personality development is a complex process of the objective world. Modern science has shown the physical,

psychical, spiritual, social, and other components (aspects) of personality development to study this process deeply. Therefore, the notions of biological, psychological, and social development of man are used in science. Pedagogy also studies the problems of human spiritual development, in mutual relation with these components of personality development.

**Pedagogical technology** is a complete set of operations to form and control knowledge, skills, habits, and attitudes according to the set goals. Some researchers suggest to include the terms of "self-education", "reeducation", "pedagogical process", "social formation" and so on in the list of basic pedagogical notions.

### ***1.3. Differentiation processes in pedagogy***

Pedagogy is a comprehensive science, and it is a fundamental science. It studies the methodological, theoretical and applied problems of the pedagogical process in educational institutions. General education school is a public school worldwide, and as it forms the basis of the education systems, other links of those systems (vocational education, secondary specialized education, higher education) are built on it. Just because the pedagogy of general education school is a common scientific basis for other fields of pedagogical science, it is a general pedagogy.

As a result of flexible ***differentiation*** of the science of pedagogy, it has received the status of general pedagogy, not just pedagogy. Giving it this status is diversification and maintenance of basic scientific status. At the present time, the system of pedagogical sciences includes the following fields:

***Pre-school pedagogy*** studies the issues of upbringing and teaching of pre-school children.

**Special pedagogy (defectology)** develops psycho-physiological features of children (as well as adults) with physical and mental disabilities, theoretical foundations, principles, methods, forms of organization, and means of their education.

There are also fields of special pedagogy: surdopedagogy, typhlopedagogy, oligophrenopedagogy and logopedics.

They study the education of people with a disability: surdopedagogy deals with deaf and dumb, typhlopedagogy – blind, oligophrenopedagogy – mentally retarded, imbecile, and logopedics – speech therapy.

**Methods of teaching subjects** study the features of the application of learning patterns in teaching separate subjects (language, literature, mathematics, chemistry, etc.) and learn its optimal methods and tools.

**Vocational pedagogy** studies the regularities of specific professional activities, makes theoretical generalizations, and develops the principles and technology of human education. Researchers distinguish industrial, military, and medical pedagogy, depending on the field of profession.

**Higher school pedagogy** studies the specific features of the higher educational process in higher education institutions.

**Social pedagogy** studies the issues of social education of people of all age groups and social categories in specially created organizations.

**The history of pedagogy** studies the regularities of pedagogical theories and school history development in different periods.

**Comparative pedagogy** comparatively studies the regularities of the functioning and development of education and upbringing systems. More than 15 fields of pedagogical science (for example, ethnopedagogy, valeology, etc.) are

mentioned in the scientific literature.

#### ***1.4. Integration processes in pedagogy***

Like any other science, pedagogy is closely related to some other sciences and maintains its independence. This connection is primarily associated with the sciences that study human in different directions.

Pedagogy, first of all, is related to ***general psychology, child psychology, pedagogical psychology, and social psychology***. The condition that provides this connection is the study of the human psyche by both fields of science. While psychology studies the human psyche, the objective laws, and stages of its development, pedagogy studies the objective laws of the development of the student's personality, the organization, and management of education. Training and education of a person is the most important factor in the purposeful development of the psyche. Pedagogy is additionally enriched by considering the scientific results of psychology related to the formation of mental processes and mental characteristics.

The integration of pedagogy and psychology has led to the emergence of new fields of science – **pedagogical psychology** and **psychopedagogy**.

As a product of biological evolution, man is the subject of research of the **biological sciences** and **physiology**. Anatomy and physiology play an important role in understanding the biological nature of human. This includes the typological features of the activity and functioning of the higher nervous system, the first and second signaling systems, the sensory organs, the musculoskeletal system, the cardiovascular and respiratory systems. ***Human anatomy*** and ***physiology*** study the structure, functions and development patterns of the body

and organs of a developing child at different ages. Pedagogy relies upon all this information, especially the laws of higher nervous activity. The theory of the physiology of the higher nervous system explains the physiological nature of a number of important issues of the pedagogical process, including how to equip students with knowledge, skills, and habits.

Pedagogy is also related to *school hygiene*, which is about protecting and strengthening students' health during schooling.

Throughout history, pedagogical theories have been closely associated with philosophical views, often put forward by philosophers. The pedagogical theories developed in connection with various educational systems were influenced by one philosophical current and referred to either the advanced or the reactionary philosophy of their time. Different philosophical concepts have determined the direction of development of teaching, upbringing, and education, causing the emergence of pedagogical trends.

*Philosophical sciences* (dialectical materialism, science, ethics, aesthetics, etc.) help pedagogy correctly define the essence and purpose of education, take into account the laws of thinking, and develop the pedagogical process.

Pedagogy is also related to the sciences that study a person in society, his social relations and attitudes. *Therefore*, it is no coincidence that pedagogy has a stable relationship with *economics*, *sociology*, *political science*, and other social sciences. Economic policy has always been a necessary condition for the development of education.

Economic stimulation of scientific research on pedagogy is one of the main factors ensuring the development of pedagogy. The connection of pedagogy with *sociology* is traditional. Both fields of science reveal the planning of

education, the main development trends of one or another group of the population, the socialization of the individual in various social institutions, and the regularities of education, upbringing. As education policy reflects the ideology of the state, pedagogy is closely related to *political science*. Political science explains man as a subject of political consciousness, studies the conditions and mechanisms of the formation of his consciousness, the possibility of assimilating political ideas.

The relationship of pedagogy with other sciences can be generalized as follows:

- pedagogy uses the main ideas, theoretical provisions, and generalized results of other sciences;
- pedagogy uses research methods of other sciences;
- concrete results of scientific researches in psychology, physiology of higher nervous activity, sociology, etc. are applied in pedagogy;
- pedagogy participates in complex studies of man.

The data from a number of other sciences: *law, computer science, statistics, ecology, ethnography, history, and technical sciences*. are also used in pedagogical researches.

#### ***1.5. Basic principles of state education policy, forms of education and getting education. Stages and levels of education***

*The legislation of the Republic of Azerbaijan on education* is based on the Constitution of the Republic of Azerbaijan, the Law of the Republic of Azerbaijan “On Education”, the Law of the Republic of Azerbaijan “On Pre-school Education”, and other normative and legal acts and international agreements to which the Republic of Azerbaijan is a party.

The main goal of education legislation is to ensure and protect the constitutional rights of citizens in the field of education, correctly define the rights and obligations of executive structures, students and educators, individuals and legal entities, regulate relations between them, create legal guarantees for free activity and development of the education system.

*Basic principles of state policy in the field of education are:*

- **humanism** - acceptance of national and universal values, free development of personality, human rights and freedoms, health and safety, care and respect for the environment and people, tolerance and patience as a priority;
- **democracy** (being democratic) - educating students in the spirit of free-thinking, expanding powers and freedoms in organizing and managing education on a state-public basis, increasing the autonomy of educational institutions;
- **equality** - creating opportunities for all citizens to receive education on equal terms and ensuring the right to education;
- **nationalism and secularism** - creation and development of a secular education system based on the protection of national and universal values and ensuring their dialectical unity;
- **good quality** - compliance of education with existing standards, norms, socio-economic requirements, interests of the individual, society, and the state;
- **efficiency** - organization of educational and scientific creativity with constantly developing and useful education, focusing on the results in modern ways;
- **continuity, unity, permanency** - the possibility of obtaining an education at several levels based on existing

educational standards, curricula and plans that ensure close dialectical interaction between different stages of education and its consistent continuity throughout a person's life;

- **inheritance** - successive transfer of knowledge and experience gained in the field of education to the next generation (period);

- **liberalization** - expanding the sphere of education and openness of educational activities;

- **integration** - development of the national education system based on effective connection, adaptation, and integration into the world education system.

***The main goal of education.*** The primary purposes of education in the Republic of Azerbaijan are:

- to educate citizens and individuals who understand their responsibility to the Azerbaijani state, respect the national traditions and principles of democracy, human rights, and freedoms, are committed to the ideas of patriotism and Azerbaijanism, and think independently and creatively;

- to train modern-minded and competitive specialists who protect and develop national-moral and universal values, have a broad outlook, can evaluate initiatives and innovations, have theoretical and practical knowledge;

- to ensure the acquisition of systematized knowledge, skills, and habits, and continuous professional development to prepare students for social life and productive work.

***1.5.4. Forms of education.*** The following forms of education are applied in the Republic of Azerbaijan:

- formal education - a form of education ending with the issuance of a state document on education;

- non-formal education - a form of education obtained in various courses, circles, and individual classes and not accompanied by the issuance of a state document on education;

- informal education - a form of acquiring knowledge through self-education;

**1.5.5. Forms of getting education.** The following forms of getting education are determined in the Republic of Azerbaijan:

- 4.1. full-time education;
- 4.2. education by correspondence;
- 4.3. distant education;
- 4.4. free (externate) education

**1.5.6. Stages and levels of education.** The following stages and levels of education are defined in the Republic of Azerbaijan:

- 5.1. pre-school education.
- 5.2. general education:
  - 5.2.1. primary education;
  - 5.2.2. general secondary education;
  - 5.2.3. full secondary education;
- 5.3. first vocational education;
- 5.4. secondary special education;
- 5.5. higher education:
  - 5.5.1. baccalaureate;
  - 5.5.2. masistracy;
  - 5.5.3. doctorate.

***Check yourself.***

**1. What does pedagogy mean as a notion?**

- A) Pedagogy means – “pedagogue” – the act of leading a child to school.
- B) Educators who taught the rich children at home.
- C) People who both took the children to school and taught them.

- D) Nurses who kept busy with the upbringing of children.
  - E) People who took the poor children to school.
- A) B) C) D) E)

**2. How can pedagogy be characterized as a science?**

- A) Pedagogy is a science that only studies the laws of the transfer of social experience by older generations.
  - B) Pedagogy is a science that studies the laws of the transfer of social experience by older generations and the active assimilation of this experience by younger ones.
  - C) Pedagogy is a science of active assimilation of this experience by younger ones.
  - D) Pedagogy is a science that studies the laws of the transfer of social experience by younger generations.
  - E) Pedagogy is a science that doesn't study the laws of older generations' transfer of social experience.
- A) B) C) D) E)

**3. Define the correct order of the parts of the definition of education given in the text.**

- 1) education is given to the benefit of society and the state to develop the intellectual and emotional spheres of personality, preparing him or her for life;
  - 2) the level of learning is verified and evaluated by the accepted criteria;
  - 3) the content of education is mastered in educational institutions and through self-education;
  - 4) the content of education is determined following modern standards;
  - 5) the educational process ends with the issuance of certain legal documents.
- A) 1, 3, 5, 4, 2   B) 1, 4, 3, 2, 5   C) 5, 4, 3, 2, 1  
D) 4, 3, 1, 5, 2   E) 3, 2, 5, 1, 4

**4. Match the definitions of theoretical functions to their levels:**

1. *Descriptive and explanatory level*

2. *Diagnostic level*

3. *Prognostic level*

a) This intends to bring to light the situation of pedagogical activities, the effective activity of teachers and students, the conditions and reasons that create them.

b) It intends to study pedagogical reality and build a model of change of existence based on it. This level is related to revealing the essence of pedagogical events, finding events in the depths of the pedagogical process, scientifically substantiating the proposed changes.

c) This is the study of advanced pedagogical practice.

A) 1c; 2a; 3b    B) 1a; 2c; 3b    C) 1b; 2c; 3a

D) 1b; 2a; 3c    E) 1c; 2b; 3a

**5. Match the definitions of technological functions to their levels:**

1. *Project level*

2. *Changer level*

3. *Reflexive (involuntary, unusual) and corrective level*

a) At this level, the achievements of pedagogical science are applied to improve and restructure educational practice;

b) It includes working out curricula, programs, textbooks and teaching aids, pedagogical recommendations, etc. These materials are compiled based on theoretical concepts and determine the plan of the pedagogical activity, its content, and character, norm, or regulator.

c) This level intends to assess the impact of research results on educational practice and then correct the interaction between scientific theory and practice.

A) 1c; 2a; 3b    B) 1b; 2a; 3c    C) 1b; 2c; 3a    D) 1a; 2c; 3b    E) 1c; 2b; 3a

**6. Define the complete line of the main notions of pedagogy?**

A) teaching, education, formation, and development.

B) upbringing, education, development.

C) education, development, pedagogical technology.

D) teaching, upbringing, education, formation and development, pedagogical technology.

E) formation and development, upbringing, teaching.

A) B) C) D) E)

**7. Define the complete line of the fields that are included in the system of pedagogical sciences.**

A) Higher school pedagogy, comparative pedagogy, the history of pedagogy, social pedagogy.

B) Special pedagogy, methods of teaching subjects, vocational pedagogy, higher school pedagogy.

C) Methods of teaching subjects, vocational pedagogy, higher school pedagogy, social pedagogy, the history of pedagogy.

D) Vocational pedagogy, pre-school pedagogy, special pedagogy, methods of teaching subjects, vocational pedagogy.

E) Pre-school pedagogy, special pedagogy, methods of teaching subjects, vocational pedagogy, higher school pedagogy, social pedagogy, the history of pedagogy, comparative pedagogy.

A) B) C) D) E)

**8. Define the correct line of the sections of pedagogy.**

A) General bases of pedagogy, didactics (theory of education and teaching).

B) Didactics (theory of education and teaching), theory of upbringing

C) General bases of pedagogy, didactics (theory of education and teaching); theory of upbringing; schoolconducting.

D) Theory of upbringing, school studies.

E) School studies, didactics (theory of education and teaching)

A) B) C) D) E)

### **List of recommended literature**

#### **Chapter 1**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

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## CHAPTER II

### METHODOLOGY AND RESEARCH METHODS OF PEDAGOGY

#### *2.1. Methodology of pedagogy*

In modern science, methodology ("*methodos*", in other word is "*way*" is a Latin word) means the study of the principles, forms, and methods of organizing scientific and cognitive activity. The methodology of science characterizes the components of research. These components include the subject matter, objectives, methods, tools, and research sequence mechanism. In pedagogy, the methodology is considered a set of theoretical provisions on the perception and change of pedagogical reality, i.e., pedagogical facts, events and processes. Any methodology performs regulatory and normative functions.

Researchers distinguish three levels in the structure of methodological knowledge:

- 1) philosophical level (general scientific level);*
- 2) specific scientific level;*
- 3) technological level.*

**At the first level**, the methodological function is performed by the whole system of philosophical knowledge. They constitute the general principles of cognition and the categorical structure of science as a whole (conceptual and terminological apparatus).

**The second level** (specific scientific level) is a set of principles and methods applied in research and procedures on this special scientific discipline.

**The third level** (technological level) consists of research methods and techniques. This level includes procedures that allow the acquisition of accurate empirical material and its initial analysis.

## ***2.2. Research methods of pedagogy***

The methods and rules of cognition are usually called research methods of objective reality. Each science collects information about the subject studied with the help of methods, analyzes the received information, joins a certain system of knowledge. That's why the pace and level of development of science depend on the research methods.

Research methods of pedagogy have developed significantly in recent years, a complex system of various methods has been created. That system includes the following.

**Observation.** This method is virtually used in all studies. The study of pedagogical events requires the researcher to observe these events directly, to collect and record factual material related to the pedagogical work. Observation of pedagogical events allows the researcher to draw correct conclusions from the observed pedagogical events. These results give grounds for this or that theoretical judgment. Certain conditions are followed during pedagogical observation. The observation is carried out according to a predetermined plan, in which the object of observation is indicated.

There are the following stages of observation:

- defining the goals and objectives of the observation (why is the observation conducted?);
- selection of an observation procedure that has less impact on the research object and it allows to collect the

necessary information (how to observe?);

- selection of registration rules of the object to be observed (how to register?);
- analysis and generalization of the received information (what result is obtained?).

Different types of observation methods are used in pedagogical research. In some cases, the researcher becomes a member of the observer's group (participant observation), and in some cases he or she observes from the outside (passive participation). Observation can be **overt** or **covert**, **extensive** or **limited**, **systematic** or **episodic**. **Extensive** (or *complete*) **observation** usually covers the object entirely. In this case, the observer has to cover more schools, classes and students to comply with the relevant legislation. **Limited observation** is a kind of selective nature i.e., observation of students' cognitive activity. **Systematic observation** is a long-term observation, and it lasts for a long time. **Episodic observation** is of periodic character and takes relatively little time. In some cases, the observation method is not suitable to use to find out the reason for a certain event that has happened. So, in this case, to find out the reason for the educational problem to be studied, as for example, to find out the reason for student's unpreparedness for the lesson, failure in doing homework, breaking the disciplines in the classroom, etc. it is better to use the **interview** method.

**Interview.** With the help of this method, the attitude of teachers, students, and parents to any pedagogical fact and event is determined, and a certain educational event is studied by talking to others. The interview is a research method. This method is used to obtain information or clarify the issues that were not clear during the observation. As a research method, the interview has a more lively and natural character. There

are four types of interviews:

**1. General interview** (*interview with no predetermined topic*);

**2. Interview on a specific problem;**

**3. Interviews on pre-determined questions;**

**4. Interview** (*it's conducted on the bases of pre-planned questions, and the received answers are recorded*).

**Pedagogical experiment.** The essence of this research method is studying and testing the proposed pedagogical idea and hypothesis in those conditions organizing teachers' and students' pedagogical activity. The goal is to study, reveal and substantiate the interrelations between events, pedagogical ideas, and hypotheses. As the pedagogical idea and hypothesis prove themselves in practice, the corresponding theoretical generalizations and conclusions gradually appear.

According to the venue, the pedagogical experiment is distinguished as a **natural** and **laboratory** experiment. The object of a **natural experiment** can be curricula, programs, textbooks and teaching aids, principles, and methods of the pedagogical process. In a natural experiment, observation and the characteristics of the experiment have a kind of combination. **Laboratory experiment** is a more serious scientific form of pedagogical research. Special pedagogical conditions are created during the laboratory experiment.

Depending on the purpose of the research, the following types of pedagogical experiments are used. **Determinant experiment** is carried out at the beginning of the research and reveals the state of work in school practice on the studied problem. Then the second stage of research begins, and a **creative-transformative experiment** is carried out. The researcher develops a hypothesis or theoretical basis and specific methodological ways to solve the problem under

study. The next stage of the research of the problem under study is to examine the obtained results and apply the developed methods in public school practice. This task is performed with the help of a **testing experiment**. Its essence is to apply the tested methodology in another school and the work of teachers and to clarify the accuracy of the obtained results.

**Parallel** and **cross** experiments are also used in pedagogical research. Regardless of the goal, the pedagogical experiment is carried out **in three stages** (*planning, conducting and concluding*).

**Studying school documents.** Studying school documents plays an essential role in characterizing the pedagogical process. Class journals, minutes of meetings and gatherings, lesson schedules, internal disciplinary rules, teachers' calendar-thematic plans, lesson outlines, etc., are wide sources of information for the researcher. These documents are the main and valuable source for determining the cause-and-effect dependency, interactions between the pedagogical facts and events being studied, and obtaining objective information. However, studying school documents must be combined with other methods.

**Studying students' creative products.** This method is widely used in pedagogical researches. During the teaching process and in their spare time, students perform various home and class writing assignments, solve problems, draw pictures, make figures, write poems and stories. This method is required to be applied when studying students' characteristics, tendencies, and interests, attitudes to activities, and level of development.

**Studying and summarizing advanced experiences.** This method aims to study and theoretically generalize the work

experience of leading schools and teachers. Sometimes teachers achieve important methodical successes that are not known to pedagogy but are innovative empirically (through experience). Theoretical generalization of advanced pedagogical experience in educational work allows to include this innovation in pedagogical science.

**Sociological research methods** (*rating, questionnaire*). As these methods passed from sociology to pedagogy, they are called sociological research methods. In some cases, a large-scale study of this or that pedagogical fact and event is necessary. Therefore, it is necessary to survey a large number of students.

**Rating** (*assessment*) is a research method. With its help, respondents are asked to assess individual's moral qualities, as well as the behavior of students.

**Questionnaire** is a method of collecting mass material with the help of specially designed questions. This method allows to involve more students in the research. The survey is based on probabilities. Students' answers to the questions, asked following the purpose of the research are analyzed, and initial acquaintance with the mass material is carried out. At present, **overt** and **covert**, **named** and **anonymous**, etc., questionnaires are used in pedagogical researches. Questionnaires are also used by teachers and head teachers of the class to inquire about various questions.

**Mathematical-statistical method** is used to determine the degree of accuracy and reliability of the results obtained with the help of other methods. In this case, a quantitative analysis of the factual material is given.

**Modeling** is a method of creating and researching models.

**Pedagogical test.** A pedagogical test is a purposeful, simultaneous examination for anyone that allows an objective

study of the studied side of pedagogical process in a strictly controlled environment. Unlike other control methods, the test is distinguished by accuracy, simplicity, and automatization possibility. In pedagogy, the test is used, first of all, to check the learning outcomes, the success of students. With this purpose, tests that determine 'success', 'total', 'speed', and 'level' of mental development of students are widely used.

**Inductive and deductive methods.** These are methods of logical generalization of empirically obtained data. The *inductive* method implies that the development of thought goes from specific consideration to general conclusions. In the *deductive* method, the opposite happens; the idea develops from a general consideration to a specific conclusion.

*Check yourself.*

**1. Match the levels in the structure of methodological knowledge to their definitions:**

- 1) *philosophical level (general scientific level);*
- 2) *specific scientific level;*
- 3) *technological level.*

**a)** This level consists of research methods and techniques. It includes procedures that allow the acquisition of accurate empirical material and its initial analysis.

**b)** At this level, the methodological function is performed by the whole system of philosophical knowledge. They constitute the general principles of cognition and the categorical structure of science as a whole (conceptual and terminological apparatus).

**c)** This level is a set of principles and methods applied in research and procedures on this or that special scientific discipline.

**A) 1c; 2a; 3b    B) 1a; 2c; 3b    C) 1b; 2c; 3a    D) 1b;  
2a; 3c    E) 1c; 2b; 3a**

**2. Define the complete line of research methods of pedagogy.**

**A)** interview, pedagogical experiment, studying school documents, mathematical-statistical method, studying students' creative products.

**B)** observation, interview, pedagogical experiment, mathematical-statistical method, studying school documents, students' creative products, studying and summarizing advanced experiences.

**C)** studying and summarizing advanced experiences, sociological research methods, mathematical-statistical method, modeling, pedagogical test, inductive and deductive methods.

**D)** observation, interview, pedagogical experiment, studying school documents, studying students' creative products, studying and summarizing advanced experiences, sociological research methods, modeling, pedagogical test, inductive and deductive methods, mathematical-statistical method.

**E)** studying school documents, studying students' creative products, studying and summarizing advanced experiences, sociological research methods,

**A) B) C) D) E)**

**3. Define the correct order of the stages of observation.**

**a)** selection of an observation procedure that has less impact on the research object. (It allows to collect the necessary information (how to observe?).

**b)** analysis and generalization of received information (what result is obtained?).

**c)** selection of registration rules of the object to be observed

(how to register?).

**d)** defining the goals and objectives of the observation (why is the observation conducted?).

**A) d; a; c; b    B) a; c; b; d    C) b; a; c; d**

**D) b; c; a; d    E) d; b; c;a**

**4. Define the sociological research methods.**

**A)** modeling, pedagogical test, mathematical-statistical method.

**B)** studying school documents, inductive methods.

**C)** rating, questionnaire

**D)** studying and summarizing advanced experiences, interview.

**E)** pedagogical experiment, deductive methods.

**A) B) C) D) E)**

**List of recommended literature**

**Chapter II**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p.<https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu6legC>

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## CHAPTER III

### TEACHER OF A MODERN SCHOOL

#### *3.1. Functions of a teacher*

A teacher is a person who is specially trained and professionally engaged in the pedagogical activity. Teacher act in accordance with pedagogical knowledge and skills, and bears responsibility for the quality of performance of their professional duties in the prescribed manner.

A teaching profession is a very complex type of human activity.

The gist of a pedagogical function is to show the teacher the direction of applying professional knowledge and skills. The main fields of pedagogical activity are teaching, education, upbringing, development, and formation of students. In each of these fields, the teacher does a lot of specific work. But looking at the root of all this work, it becomes clear that the main function is to manage the processes of teaching, upbringing, education, development, and formation.

In his time, Socrates called professional pedagogues "obstetricians of thought." A competent teacher should not give ready knowledge to a student but help him form an idea in his mind.

What are the *characteristic features* and *uniqueness* of teacher's work? Researchers have developed and implemented dozens of models in this regard. One of these models considers pedagogical management as the main function of a teacher. The term "pedagogical project" is used to concretize the management function. This term means any

work that is considered, i.e., has been thought about carefully and performed until the end. For example, such work can be studying a topic or a section of a lesson, organizing a quiz, an olympiad, school holidays, and ecological expedition. A teacher should manage all this work. The smaller the error is, the higher is the efficiency.

**The first function of the pedagogue** is related to the initial stage of the project. At this stage, the goal is set. It is known that the goal is the main factor of pedagogical activity. The goal directs the work of the teacher and his students to achieve a common result. Management of the educational process is based on the level of preparation, opportunities, upbringing and development of students. This is achieved by using **diagnostics** ('diagnostics' is a Greek word that means 'to clarify knowledge'). Without knowing the development of physical and mental characteristics of schoolchildren, the level of their mental preparation and moral courteousness, i.e., the quality of being well-bred, the conditions of upbringing in the classroom and in the family, it is impossible to correctly determine the goal and choose the means to achieve it. Diagnostics is carried out inseparably from **prognostication** ('prognostication' is a Greek word that means 'foresee'). This is reflected in the teacher's ability to anticipate the results of their work in specific situations. On these bases, teacher determines the strategy of activities, assesses the possibility of obtaining a pedagogical product in a certain quantity and quality.

A professional pedagogue with diagnosis and favorable prognosis begins to design educational activities.

**The teacher's designing function** is to build future activity model and to choose the ways and means to achieve the goal in the determined conditions and time. Diagnosis,

prognosis, project are the basis for the development of a plan of educational activities. This completes the preparatory stage of the pedagogical process. A professional teacher can't afford to go to class without a well thought and detailed plan. The volume of the plan does not matter, and the main thing is that it exists.

At the next stage, the teacher performs the **function of information transfer, function of organization, function of monitoring, function of assessment and function of correction.**

The essence of the **function of information transfer** is known by its name. Teacher is the main source of information for students. Teacher knows a lot of things about subject, its teaching methods, pedagogy, psychology.

**The organizational function of the teacher** is mainly related to the involvement of students in the intended work and cooperation with them to achieve the goal.

Sometimes the **functions of monitoring, assessment, and correction** are combined. The teacher needs this when creating effective incentives to develop the pedagogical process. When monitoring and evaluating knowledge, the reasons for not only students' successes but also their failures become clear. The collected information allows to adjust the process, to include effective incentives, to use effective tools.

The teacher performs **an analytic function** at the final stage of any pedagogical project. The teacher analyzes the completed work and determines its effectiveness. If the indicator is lower than expected, teacher looks for ways to catch up with the causes of this backwardness in the future.

As a teacher performs numerous functions, his or her work includes components of many specialties in his or her work. These include the profession of an actor, directing and management, researching, and selectionists specialties.

The teaching profession is a desirable profession on earth. As long as there is a society, there will be a teacher. The fate of each person, even if it's few, is in the hands of the teacher. Everything enlightens in our lives comes from a teacher who is a free civil servant of truth, wisdom, kindness, and humankind.

### ***3.2. Requirements for a teacher***

The professional and social functions of a teacher makes high demands on their personality and moral image. Requirements for a teacher are an imperative (unconditional) system of professional qualities that determine the success of the pedagogical activity.

First of all, it should be noted that only half of practical pedagogical activity is based on rational technology. The other half of it falls to the share of mastery. Therefore, the main requirement for a teacher is the availability of his pedagogical skills. Well-known experts in pedagogical work believe that there are special pedagogical abilities. This issue is currently being studied intensively. Pedagogical skills are the personal qualities of a teacher. These abilities show a tendency to work with children, love children, enjoy communication with them. Pedagogical skills are divided into seven groups:

**1. Organizational skills** manifest in the teacher's ability to unite children, engage them, assign responsibilities, plan work, summarize the performed work, etc.

**2. Training (teaching) skills** include specific skills, that's to select and prepare teaching materials, visual aids, equipment, and to convey the teaching material in an understandable, clear, expressive, convincing and consistent

manner, and to stimulate the development of cognitive interests and spiritual needs, to increase educational and cognitive activity, etc.

**3. Perceptive skills** manifest themselves in the ability to see students' inner world, to objectively assess their emotional state, and reveal the features of the psyche.

**4. Communicative (communication) skills** manifest themselves in teacher's ability to establish a pedagogically purposeful relationship with students, their parents, colleagues, managers, leaders of the educational institution.

**5. Suggestive (persuasive) skills** consist of emotional and volitional influence on students.

**6. Research skill** manifests itself in the ability to understand and objectively evaluate pedagogical situations and processes.

**7. Scientific-cognitive skills** are the abilities to master scientific knowledge in the chosen field.

By recent researches, teacher's pedagogical skills is interpreted as pedagogical competence. Not all of these skills are equally important for teacher's practical activity. Scientific research of recent years show that there are 'leading' and 'auxiliary' skills among these abilities. According to numerous surveys, **didactic** and **organizational** skills are considered to be leading skills, and the rest are considered auxiliary skills.

The ideal pedagogical activity should be carried out by talented and capable people. As the pedagogical profession is a mass profession, it is difficult to find as many talented and capable teachers as desired. Therefore, it is necessary to approach the issue from a slightly different perspective. Many experts consider that even if a person does not have bright, noticeable abilities, he or she can compensate for many important professional qualities at the expense of

diligence, honesty, a serious attitude to duty, and constantly working on himself.

The important professional qualities of a teacher include industriousness; discipline; responsibility; ability to set a goal and choose the way to achieve it; organization, self-discipline; decisiveness; perseverance; to raise the level of their profession, the quality of their work systematically and according to the plan, etc.

In our lives, the human qualities of a teacher are of great importance for creating favorable relationships in the educational process. These qualities include humanism, kindness, tolerance, honesty, fairness, objectivity, generosity, respect for people, optimism, communication, showing interest in students' lives, self-criticism, vibrant culture, and so on.

The most essential quality of a teacher is humanism. This quality is the attitude towards the person who has the highest value on earth. This attitude is expressed in specific work and activities. Humanistic attitudes consist of interest in the student's personality, sharing his (her) situation, respect for his (her) opinion, high demand for teaching activities, taking care of the development of his (her) personality, and so on.

The teacher is always an active, creative person. To provide pedagogical guidance to a class and children, a teacher must be persistent, certain and ready to cope with any situation independently. Tolerance and self-control are essential qualities for the teaching profession. A professional teacher must maintain a leading position in the educational process in the most unexpected situations.

*Fairness* is an integral part of the professional qualities of a teacher. The teacher should systematically assess students' knowledge, skills, and actions. Therefore, his (her) considera-

tions and opinions about the assessment should correspond to the students' level of development. Students think about the objectivity of the teacher based on these qualities. Nothing can strengthen a teacher's moral reputation as much as the ability to be objective. The prejudice and subjectivity of the teacher damage a lot the educational work.

The teacher must be demanding. It is an essential condition for successful work. The teacher must first set high demands, because one cannot require from others what he or she does not have for themselves.

Pedagogical requirements must be reasonable and take into account the opportunities of the developing individual.

The teacher's sense of humor neutralizes the strong tension that may exist in the pedagogical process. It is said that a cheerful teacher teaches better than a gloomy teacher, which helps to create a positive emotional background in the classroom.

We need to talk specifically about pedagogical tact. Pedagogical tact is a special type of skills that means following certain limits in communicating with students. Tact is a generalized expression of the educator's, teacher's mind, feelings and culture. Respect for the student's personality is the core of pedagogical tact. Understanding students does not allow the teacher for non-tactical actions, but helps to choose the optimal means of influence in a particular situation. The teacher does not educate only with the ideas reflected in the knowledge, but also he or she brings up by conveying ideas to the class. In teaching, not only minds influence each other, but the heart of the teacher comes into contact with the heart of the student.

The destiny of a student's encounter with the subject depends to a large extent on the establishment of a teacher-student relations. If there is no great sympathy and love for a

math teacher, it is impossible to love math. It is impossible to love art without understanding art teacher.

In the teaching profession, personal and professional qualities form a unity. Professional qualities include knowing the subject and its teaching methods, psychological preparation, general knowledge, a broad cultural level, pedagogical skills, pedagogical labor and communication technology, organizational skills and habits, pedagogical tact, pedagogical techniques, public speaking skills, and other qualities.

Preference for science is an important quality of a teacher. Interest in science helps teacher develop a sense of respect for the subject, preserve the scientific culture, show students the connection between the science and the general processes of human development, and teach them to see.

Love for one's professional work is such a quality, without which it is impossible to be a teacher. The personality of a modern teacher is often determined by their knowledge and high cultural level. A person who wants to be able to freely realize what is what in the contemporary world should know a lot. A knowledgeable educator should be a bearer of high personal culture.

The first profesiogram of a teacher was adopted in the 20-30s of the XX century, and the new one in the 80s. Comparing these profesiograms, it becomes clear that some of the requirements for a teacher have disappeared, and new ones have appeared. Among the disappeared qualities, there is 'good health'. A question may be asked: "Doesn't a modern teacher need health?"

The annual survey of 1,000 first-year students shows that about 85 percent of them give first place to the quality of teacher's fairness, the second place to the quality of

exactingness, and the third place to the knowledge of their subject. The first 10 places among 20 qualities were taken by the following qualities: fairness, exactingness, knowledge of the subject, kindness, trust students, politeness, humility, attentiveness, organization, moral purity.

It is typical that the resulting image of the teacher in the student's heart is not always preserved; it changes as students move from class to class. In primary school, the teacher is ideal, and their requirements are low. Unfortunately, teacher idealization does not last long, and decreased tendency is observed.

### ***3.3. Teacher's pedagogical mastership***

There are many definitions of a teacher's pedagogical mastery. In each of them, something new, new quality is shown. In this sense, the content of the notion of mastery in teaching, education, and upbringing is constantly improving. A pedagogue who is a master of their craft is a highly cultured specialist. He or she has a deep knowledge of his or her subject, is well acquainted with the relevant fields of science, has a practical understanding of general issues, especially child psychology, and is well experienced in the methods of teaching and upbringing.

The essence of the notion of 'teacher's mastery' has historically been understood in two ways in pedagogical theory. According to the first way, the method plays a leading role in educational work. According to the second one, teacher's personality plays the leading role in educational work. In fact, the method is inseparable from teacher's personality who applies it. A teacher need to know and be able to master many things. It is essential to know the objective laws and principles of teaching and upbringing to

be able to use effective technologies of the educational process, including choosing the right technology for each specific situation, diagnosing, and planning the process.

There is an opinion that only talented people can become master teachers. There are other ideas: a teaching profession, i.e. a mass profession, privilege people with special abilities. However, nature has endowed almost all people with the qualities of an educator. The task is to teach pedagogical skills.

Research shows that real talented teachers are no more than 12 percent. The majority of teachers are masters who are experienced in teaching methods and techniques.

In the pedagogical literature of that time, when talking about the qualities of a teacher, it was desired that he or she be a caring, kind, child-loving, full of love in his or her heart person.

An unprofessional and sentimental approach to the teacher's work infuriated A.S.Makarenko. He considered that the 'teacher's heart' could not be used as an internal regulator of relations with students. According to A.S.Makarenko, the 'system of kind hearts' leads to the struggle to win children's sympathy and the title of 'the most beloved teacher.' He called to approach the teacher from the production position and see him as a laborer, a worker, and toiler.

The mastery of a teacher is, first of all, organizing the educational process. A master teacher achieves students' necessary upbringing, development, and knowledge even in the most unfavorable conditions. A real teacher can find non-standard answers to any question and take a special approach to the student. Such a teacher has in-depth knowledge of the subject, the foundations of the development of the science that he or she teaches, is familiar with modern literature,

culture, sports novelties, can analyze international events. However, knowledge is not enough yet. The teacher knows and loves his or her subject, but he or she cannot convey his or her knowledge to students. So, a master teacher is a teacher who perfectly knows modern teaching methods.

Mastery of the teacher shows itself in teaching students to learn. An experienced teacher achieves to help students master the teaching material in the classroom. For him or her, homework is a means of deepening, strengthening, and extending the knowledge. The key to the success of experienced teachers is the ability to manage the activities of students.

One of the important indicators of mastery is activating students to develop their abilities and independence. The master teacher, using a variety of methods to activate the educational process, must be able to engage students to think in class.

The teacher's aim is to find ways to instill positive emotions in the learning process itself. These are the usual tricks: changing the way of working, methods, teacher's emotionality, teacher's activity, interesting examples, relevant comments, etc. These techniques lead not only to temporary success, but also help increase teacher's sympathy and instill a stable, permanent interest in the subject.

The essence of pedagogical mastery manifests itself in the teacher's personal culture, knowledge, acquisition of the methods of teaching and upbringing, pedagogical techniques and advanced experiences, in his or her comprehensive theoretical preparation.

One of the crucial features of pedagogical mastery is the high level of teacher's pedagogical technique. The master teacher must have a stock of all pedagogical tools, and choose the most economical and effective means to carry out

the intended work.

First of all, the teacher must communicate with children to choose the appropriate tone and style. The approach, treating children should be natural and straightforward.

One of the components of pedagogical technique is the teacher's ability to control the attention of himself or herself and students. The teacher works with a large group of children; the children perform a lot of educational operations, all this should not be left out of the teacher's attention. One of the most essential qualities of a teacher is the ability to determine the internal state of a student and this should not be overlooked when choosing pedagogical methods. Always taking into account the psychological state of the student is the basis of pedagogical tact and plays an important role in the pedagogical activity.

The pace in pedagogical activity is an integral part of pedagogical techniques. One of the reasons for some teacher's mistakes is that they do not take into account the pace of teaching operations and poorly measure the pedagogical solution of the problem. Pedagogues, in this case, are sometimes in a hurry, sometimes are late, which in any case decreases the effectiveness of the pedagogical impact.

Ways for expressing the subjective attitude of a teacher to a particular action of students constitute a large group of pedagogical techniques. A pedagogue cannot remain indifferent, rejoices in the good actions of students, and grieves about the bad ones.

The pedagogue's address to the students can be in the form of a request, a reprimand, an appreciation, or an order. In all these cases, the teacher always plays 'role' and always pursues one goal – to influence on students properly.

It is vital to master the culture of speech, proper breathing, and voice, as expressive speech allows pedagogue to apply the methods of pedagogical influence properly.

The educator must learn to control his or her voice himself or herself and maintain pause, posture, facial expressions, and gestures. A.S.Makarenko writes: "Having learned to pronounce the sentence "Come here" in 15-20 shades of meaning, having known the 20 subtleties of setting my face, figure, voice, I became a real master."

American educators Brophy, J., and Good, T. in the work "Teacher and student relations" deal with teacher's 'subjective' communication features. It has been found out that educators are more likely to address sympathetic children. The teacher who is unconcerned to students leaves the students out of attention. Teachers treat 'intellectuals', the more disciplined, executive students. Passive students are in the second place, they are almost devoid of the teacher's sympathy.

Depending on the style of pedagogical communication, teachers are divided into three types: active, less active, and very active. An '**active**' teacher is an initiator in the organization of communication, individualizes his or her position, relationship with students; his or her and approach varies by the experience he or she has gained. Teacher knows what he or she wants and understands what helps him or her to achieve goal. A '**less active**' teacher is dexterous in his or her approach and position, but weak inwardly. The nature of his or her communication with the class is dictated by the students, not by him or her. His or her goals are disconnected and his or her behavior adapts to the obvious conditions. A '**very active**' teacher appreciates his students and builds unreal communication models. Therefore, if a student is more active than others, he is rebellious and

deceitful; if he is a little passive, he is lazy and not knowledgeable.

Brophy, J., and Good, T. conclude that if a teacher does not communicate with the students naturally and with a sense of joy, if he considers it a heavy burden, such a teacher should leave school.

The main weapon of the teacher is the word. In addition, he has a lot of non-verbal (without speech) means of communication.

**1. Meaningful actions.** Meaningful actions are the perception of a teacher's behavior through visualization. Posture, facial expressions, hand-arm movements, glances and gait play a special role here. Research shows that, for example, if the teacher doesn't move or face is not visible, up to 10-15% of the information is lost. Students are very sensitive to the eyes and glance of the teacher. The most accurate information about the situation is conveyed through the eyes, because the narrowing and widening of the eyeballs are not subject to conscious control. The teacher's nervous and pessimistic state makes the eyeballs narrower. If face is not kind and cordial, the students feel discomfort and it decreases the efficiency of the work.

It was found out that the teacher's 'closed' pose (when trying to cover the front of the body and capture as little space as possible, standing in a "Napoleon" pose; putting his or her arms around the chest and sitting and putting both hands on his or her chin, etc.) are understood as poses of distrust, unreliability, disagreement, counteract, critical poses. 'Open' poses (standing on feet, opening arms with the inside of the hand up, sitting down and opening the arms, outstretching the legs) are understood as poses of trust, confidence, consent, kindness, psychological comfort. The

disciples (students) perceive all this unconsciously.

**2. Intonation, loudness, timbre, breathing, laughter, cough.** Sound characteristics, *the pronunciation system of long and short syllables, with and without stress*, play an important role in teacher's activity. They are usually expressed as follows: enthusiasm, joy, and dissatisfaction in a loud voice, hatred and fear loud enough, grief, sadness, fatigue, in a soft and subdued voice.

The speed of speech also reflects teacher's feelings. Excitement or anxiety shows itself in rapid speech. Speaking slowly, calmly is a sign of fatigue or arrogance.

**3. Tactile means of communication.** Caress, touch, handshake, and praise are all means of communication. They are biologically essential forms of stimulants, especially for children from single-parent, i.e., incomplete families. Only teachers who have won the children's confidence can do this. A number of factors determines the use of dynamic touches. Among them, students and teachers' status and age are of particular importance.

**4. Means of distance.** These include the orientation of teachers and students and the distance between them during teaching. The norms of pedagogical distance are determined as following distances: 1) individual communication of the teacher with students - from 45 to 120 cm; 2) formal communication in the classroom - 120-400 cm; 3) open communication when speaking in front of the audience - 400-750 cm.

Regular change of the distance of communication is a feature of pedagogical labor which requires the teacher to adapt to changing circumstances repeatedly.

**Check yourself.**

**1. Define the correct line of the functions of a teacher.**

A)diagnostics, prognostication, designing, information transfer, organization, monitoring, assessment, correction, analytic function.

B) prognostication, designing, information transfer, organization, monitoring, assessment, correction.

C)diagnostics, information transfer, monitoring, assessment, correction, analytic function.

D) designing, information transfer, organization, monitoring, assessment.

E) information transfer, organization, monitoring, assessment, correction.

A) B) C) D) E)

**2. Define the correct line of pedagogical skills groups.**

A)scientific-cognitive skills, perceptive skills, communicative skills, suggestive (persuasive) skills.

B)organizational skills, training (teaching) skills, perceptive skills, communicative skills, suggestive (persuasive) skills, research skill, scientific-cognitive skills.

C) training (teaching) skills, perceptive skills, suggestive (persuasive) skills, research skill, scientific-cognitive skills.

D)perceptive skills, communicative skills, suggestive (persuasive) skills, research skill, scientific-cognitive skills.

E)organizational skills, training (teaching) skills, perceptive skills, communicative skills, suggestive (persuasive) skills.

A) B) C) D) E)

**3. Match the pedagogical skills groups to their purposes**

1. *Organizational skills;*

2. *Training (teaching) skills;*

3. *Perceptive skills;*

a) This group of skills manifests itself in the ability to see students' inner world, objectively assess their emotional state, and reveal the features of the psyche.

b) This group of skills manifests itself in the teacher's ability to unite children, engage them, assign responsibilities, plan work, summarize the performed work.

c) This group of skills includes specific skills, that's to select and prepare teaching materials, visual aids, equipment, to convey the teaching material in an understandable, clear, expressive, convincing, and consistent manner, to stimulate the development of cognitive interests and spiritual needs, to increase educational and cognitive activity, etc.

**c) A) 1c; 2a; 3b    B) 1a; 2c; 3b    C) 1b; 2c; 3a**

**D) 1b; 2a; 3c    E) 1c; 2b; 3a**

**4. Match the pedagogical skills groups to their purposes.**

1. *Communicative (communication) skills;*

2. *Suggestive (persuasive) skills;*

3. *Research skill;*

4. *Scientific-cognitive skills.*

a) This group of skills manifests itself in teacher's ability to establish a pedagogically purposeful relationship with students, their parents, colleagues, managers, leaders of the educational institution.

b) This group of skills includes the ability to master scientific knowledge in the chosen field.

c) This skill manifests itself in understanding and objectively evaluating pedagogical situations and processes.

d) This group of skills consists of emotional and volitional influences on students.

**A) 1c; 2a; 3b; 4d),    B)1a; 2c; 3d; 4b,    C) 1b; 2c; 3a; 4d,**

**D) 1a; 2d; 3c; 4b.    E) 1c; 2b; 3a; 4d**

**5. The important qualities of a teacher include:**

I – professional qualities of a teacher

II – human qualities of a teacher

- a) perseverance, self-discipline, industriousness.
- b) humanism, show interest in students' lives.
- c) discipline, be able to set a goal and choose how to achieve it.
- d) kindness, objectivity, respect for people, tolerance.
- e) decisiveness, organization, responsibility.
- f) communication, self-criticism, generosity.
- g) honesty, fairness, optimism, emotional culture.
- h) to raise the professional level, the quality of work systematically and according to the plan.

**A) I - a, c, e, h    II - b, d, f, g**

**B) I - b, f, a, c    II - e, h, g, d**

**C) I - g, d, a, e    II - a, b, c, d**

**D) I - h, e, d, a    II - b, d, g, a**

**E) I - a, c, h, f    II - e, h, d, a**

**6. Which answer is not related to pedagogical tact?**

**A) Pedagogical tact is a special skill that means following certain limits in communicating with students.**

**B) Tact is a generalized expression of the educator's, teacher's mind, feelings, and culture.**

**C) The teacher educates only with the ideas reflected in the knowledge and doesn't convey ideas to the class.**

**D) Understanding students do not allow the teacher for non-tactical actions but helps to choose the optimal means of influence in a particular situation.**

**E) Respect for the student's personality is the core of pedagogical tact.**

**A) B) C) D) E)**

## **List of recommended literature**

### **Chapter III**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>
2. Paulo Freire. Pedagogy of Freedom: Ethics, democracy, and Civic Courage. Lanham, Md.: Rowman & Littlefield, c1998. 144 p. <http://abahlali.org/wp-content/uploads/2012/08/Paulo-Freire-Pedagogy-of-Freedom-Ethics-Democracy-and-Civic-Courage-2000.pdf>
3. Why Teachers Are Important in Society. <https://www.uopeople.edu/blog/the-importance-of-teachers/>
4. Teacher's digital competence among final year Pedagogy students in Chile and Uruguay. [//C:/Users/USER/Downloads/10.3916\\_C61-2019-03.pdf](//C:/Users/USER/Downloads/10.3916_C61-2019-03.pdf)
5. Teaching Competencies. <https://hr.abbyschools.ca/node/1936>
6. Professional Competencies of Teachers and the Qualitative Evaluation. <https://www.science-direct.com/science/article/pii/S1877042811028096>

## CHAPTER IV

### GENERAL LAWS OF PERSONALITY DEVELOPMENT

#### *4.1. The process of personality development*

According to psychologists, the number of theories about person's personality has now exceeded 100. The reason for this revival of the human personality is the growing role of the individual in society. Today, there are over seven and a half billion unique people globally. They differ not only in biological and physiological characteristics but also in individual-psychological characteristic features. People do not look alike in the color of their eyes, the timbre of their voice, the rhythm of their heart, their fingerprints, or their personality traits. In such a situation, one of the most difficult problems of pedagogical theory and practice is the personality and its development in a specially organized environment. Age physiology, anatomy, sociology, age psychology, pedagogical psychology and other sciences deal with the problem of personality. Pedagogy studies and reveals the most effective conditions for the development of personality in the educational process. There are three main directions (biological, sociological, biosociological) related to the development of personality in pedagogy and psychology.

Representatives of **the biological direction** (Sigmund Freud, 1856-1939 and others) considering the personality as a purely natural being, explain all his behavior by the influence of which he brought with him at birth, his peculiar needs, interests, instincts.

Representatives of **the sociological direction**, acknowledging that human is born as a biological being, defend the idea of gradual socialization under the influence of the social groups with which interacts. The social development of a person begins with integration into society.

According to the representatives of **the biosocial direction**, although mental processes (feelings, perceptions, thinking, etc.) have a biological nature (properties), the experience, political, moral, spiritual views, interests, abilities of personality are formed as social events.

Development is a quantitative and qualitative change in the human body. As a result of development, a person is formed as a biological species and a social being. A person's physical development characterizes the biological development of the person. Physical development also includes morphological, biochemical, and physiological development. Social development manifests itself in the mental, spiritual, and intellectual development of a person. A person is not born as a personality; he or she becomes a personality in the process of development, in a social system. A person is formed as a personality through purposeful and thoughtful education.

Human development is a very complex, protracted, and contradictory process. Changes in our bodies occur throughout our entire lives. Especially in childhood and adolescence, the physical characteristics and spiritual world of man intensively change.

Modern pedagogy considers the person as a complete mental system. Biological and sociological features are inseparable here. An individual is not only a product of social life but also a living organism. The relationship between sociology and biology in the formation and behavior of personality is quite complex and does not have the same

effect on personality at different stages of human development. All aspects of personality manifest themselves only in action and communication with other people.

A person does not have to look for or invent contradictions, and they appear as a dialectical result of the needs that have changed at every step of the development process. Conflicts are *internal*, *external*, and *general* (universal). They put in motion the development of the masses. One of the inherent contradictions in a person is the discrepancy between the emerging new needs and the ability to meet them.

Researchers have determined important dependencies in the study of human development. These dependencies indicate a logical relationship between the development process and its consequences. People have always had a question: “Why do people have different levels of development, and what conditions does this process and its outcome depend on?” Long-term research has revealed an objective law: human development is determined by internal and external conditions. Internal conditions include the physiological and mental properties of the organism, and external conditions include the environment in which a person lives and develops. In interaction with the external environment, the internal nature of man changes, new relationships are formed, which leads to the following change. It continues this way.

The development of a person and his formation as a personality is carried out by the interaction of three main factors – **genetics**, **environment** and **education**. **Activity** is also mentioned as a factor in the new scientific literature. The environment itself is divided into 1) the unorganized environment; 2) the organized environment. The educational

factor belongs to the organized environment; it is impossible to imagine it outside the general environment because it is an integral part of it.

#### ***4.2. Heredity and development***

**Inheritance is the action of inheriting certain traits and characteristics from parents to children.** The carriers of inheritance are genes. Modern science has proved that the properties of an organism are encrypted in the gene code. All information about the properties of the organism is collected right there. Both **physical traits** (features of body structure, hair, eye and skin color, etc.) and **physiological traits** (characteristics of the higher nervous system, number of nerve cells, pathological defects that cause mental disorders, some diseases - hemophilia, diabetes, etc.) pass from parents to children by inheritance.

The pedagogical aspect of the research of the objective laws of human development involves the study of three main problems. This is whether *intellectual*, *special* and *moral* qualities are inherited or not.

Science proves that abilities are not inherited; a child is born only by chance. Natural resources are the natural bases that create opportunities for the formation and development of ready abilities. For example, a child is not born with the ability to speak but is born with the natural abilities necessary to speak. The structure of child's throat, tongue, and palate and the level of development of the nervous system, the second signaling system provides with natural opportunities to speak and understand what is being said. As well as, a person is not born with the ability to write, but the structure of fingers, the state of the small muscles in child's hands, and the level of development of mind are all formed on the

bases of natural opportunities for the later development of the ability to write. These natural possibilities are innate in the child. This should be understood in the narrow sense as inheritance from parents and in the broad sense as transmission from generation to generation. The transformation of these capabilities into specific abilities depends more on the environment and upbringing as specific qualities. Abilities differ from natural abilities in that they are special qualities that arise from certain activities and upbringing.

The results of scientific research refute the idea that the *intellectual* level is passed from parents to children. Well-known pedagogues and scientists admit that genetics may not be conducive to developing intellectual abilities. For example, the weak cells of the cerebral hemispheres of children of alcoholics, the damaged genetic structures of drug addicts, and genetic mental illnesses negatively impact on the development of intellectual abilities.

Modern pedagogy considers it appropriate to create equal and suitable conditions for the development of opportunities for each child, rather than bringing to light the differences of children and adapting education to it. Foreign pedagogical systems believe that education should be adapted to human opportunities and capabilities.

There is no serious disagreement between representatives of different pedagogical systems in identifying **special opportunities**. Music, art, mathematics, linguistics, sports, and other special opportunities are considered here.

The issue of the inheritance of **moral qualities** and psyche is crucial. In pedagogy, there is an opinion that personality traits are not inherited; they are acquired in the interaction of the organism with the external environment.

Man is not born as good, evil, generous, or ungenerous. Children do not inherit the moral qualities of their parents. What a person is like depends on the environment and upbringing, and upbringing plays a leading role here. When scientists studied the genetic program, they found no good, no evil, or other moral genes. However, many scientists, relying on the theory of 'innate evil', claim that people are born good and bad, truthful or liar. The data obtained from the study of human and animal behavior give ground to such an opinion.

Humans, as biological species, have changed little throughout history, and this is one more proof of the immutability of the genetic system of human nature. A change in a human species can only happen if scientists find the means to intervene in its genetic code in practice. It is difficult to say whether such attempts will be good or bad or what they will lead to.

#### ***4.3. Environment and development***

Person is not born as a personality. The individual development of a person and the formation of personality depends on the social life conditions, the system of social relations and relations of production. Person becomes a personality only in the process of socialization, that is, in the process of communication, and interaction with other people. A person's spiritual, social, and mental development cannot occur outside of society. According to the facts known to science, 15 children were breastfed by wolves, five by bears, one by baboon, and about ten by other monkeys. One baby was breastfed by a leopard and one by a sheep. However, they could not become human.

The real being in which human development takes place

is called the environment. Factors influencing the development of human personality belong to the notion of the natural and social environment. The **social environment** *means the external conditions surrounding human life and development.* The notion of social environment covers the social structure, industrial relations system, material living conditions, the nature of production and social processes. Social environment is constantly changing and renewing. In this environment, a person is not passive, he or she is active, and in the process of activity, he or she changes his or her environment. When the social environment is created and adjusted favorably, conditions are created for the disclosure and development of the natural potential of personality. When it is not revealed, many people with artistic, architectural, and musical abilities live a normal (ordinary) life, and their talents and abilities remain closed due to the lack of opportunities for the development and social conditions. Ensuring social conditions (spacious and bright apartment, special corner for children, school for free education, teaching and writing materials, conditions for proper organization of leisure time, stadium, study or hobby group, club, etc., which will develop the ability and talent to organize proper educational work) has a great impact on normal human development of a person.

Family environment strongly impacts on the human development of especially young and school-age children. The family creates favorable conditions for the realization of their interests and needs. The foundation for moral and social qualities of personality is also laid in the family.

*The natural environment - the relief, fauna, and flora of the area, the composition and pressure of the air is a factor that significantly affects the development and spiritual*

*maturity of a person.*

There is no consensus among researchers about whether the environment or genetics has a significant impact on human development. Biogeneticists prefer genetics, and researchers in sociogenetic prefer the environment. And some researchers have tried to quantify the impact of the environment on the personality development. Very contradictory results were obtained. It turned out that the "**share**" of inheritance and environment influences on the development of individuals is not the same. According to researchers, in sociogenetic the influence of the environment is 90 percent, and according to biogeneticists, the influence of heredity is 80-90 percent. British psychologist D.Shuttleworth came to the following conclusion about the influence of these factors on mental development: 64% inheritance, 19% family environment, 17% mixed factors (the relationship between inheritance and environment).

Science strives for certainty, and that is its goal. Nevertheless even the most serious calculations of human morality and its development cannot be completely true. Each person develops in different way, the environment and inheritance have their own 'share' of influence. It is very difficult to calculate and measure this 'share' of the effect.

#### ***4.4. Education and development***

Although a child's development is possible only in a social environment, it cannot be equated with the development under the influence of upbringing. Above all, education is carried out in an organized, purposeful, and planned manner. However, the development process carried out under the influence of the external environment may not be purposeful. Even if education is carried out in a planned

manner by specialists in specially organized educational institutions (kindergartens, schools, and out-of-school educational institutions), the influence of the environment is often disorganized. Along with the purposeful teaching, it is organized according to the students' age and gender characteristics. Defects in children's morality and behavior formed due to the influence of the environment can be eliminated with the help of upbringing. The role of upbringing in pedagogical literature is assessed differently. On the one hand, it is claimed that its effects are weak and meaningless (under the influence of unfavorable inheritance and bad environment), and on the other hand, it is considered the only means of changing human nature. The idea of 'education is capable of everything' defended by pedagogy subsequently did not fully justify itself. Research shows that although many things can be achieved through education, it is mostly related to changing a person completely. Education does not affect everyone equally. It is development oriented and directs the development to a specific goal. One of the most important tasks of a well-organized upbringing is to reveal a person's inclinations, interests, and abilities, to develop a person in accordance with the individual characteristics, abilities and capabilities. Research shows that the basic mental qualities of a person are not reflected in the baby monkey, which is kept in the same conditions as a child, fed, and treated in the same way as humans, because the baby monkey does not have the natural ability to develop certain qualities.

Although upbringing influences on human development, it also depends on the development, which is based on a person's level of development. This is the dialectics of the relationship between development and upbringing. The

effectiveness of upbringing is determined by the level of readiness of a person to the perception of the upbringing effect, which directly depends on the influence of inheritance and environment. According to the objective law, substantiated by the eminent psychologist L.S.Vygotsky (1896-1934), the goals and methods of upbringing should correspond not only to the child's level of development, but also to his 'zone of proximal development'. He has determined two levels of mental development: **1) *the actual level of development***; **2) *'the zone of proximal development'***. At the first level, the child can perform the task according to his or her strength. At the second level, he or she cannot perform a task that does not correspond to his or her strength, and needs the help of adults. The task of education is to create a 'zone of proximal development' to reach the current level of development. After that, a new development zone should be created for him. This situation is repeated in all school years.

There is also a theory of '***Double factor***' in personality development. One of the leading representatives, i.e., pioneers of this theory, was G.Stanley Hall. This factor manifests itself in various forms. According to this theory, a child's destiny is related, on the one hand, to the biological factor, he or she inherits and, on the other hand, to the social environment in which he or she lives (family, neighborhood, etc.) or to upbringing. A group of scientists (K.D.Ushinsky, V.A. Sukhomlynsky and others) have tried to prove that both the environment and upbringing develop personality. The shortcoming of this theory is the denial of the role of inheritance and the fact that a person's activity and its impact on the environment are forgotten. Another form of the '***Double factor***' theory claims that personality is a product of both inheritance and environment. Educators, philosophers,

and psychologists have valued the role of heredity and environment, or environment and upbringing, or heredity and upbringing, in the formation of personality, and they have been proponents of the Double Factor theory. Some researchers ignored the environmental factor and tended to explain the formation of personality by inheritance and upbringing factors. According to them, education should be based on the natural forces of personality. The more reliable the natural forces, the inheritance possibilities are, the more successful a person's upbringing will be. J.H.Pestalozzi is the brightest representative of this theory.

Prominent educator A.S.Makarenko proved in practice that corrupt behavior of children is the result of a corrupt environment and the result of arbitrary upbringing. Suppose these children are actively involved in the work of proper upbringing and become an active factor in the environment. In that case, the moral qualities that are the product of a defective environment, and defective upbringing can be eliminated and replaced by useful qualities for society.

#### ***4.5. Activity and development***

Environmental and educational factors are dynamic, moving, and evolving factors. People are involved in activities both in the environment and in the educational process. Here, activity is separately considered as a factor of development. The condition for developing a person as a personality is complex activity. By engaging in various activities, a person interacts with other individuals and groups. The more a person works in one field, the higher level of development will be in that field. In the activity process, a person develops attitude to the world around him

or her. Different types of activities influence on the formation of personality in different ways. It 's necessary to identify whether a particular activity is the main type of activity for the corresponding age period or not, and its organization plays a key role here.

In order to form a personality in accordance with the needs of society, the social order of the state, it is necessary to organize and direct its activities properly. This is the greatest difficulty of education and upbringing. Unfortunately, in many cases, education does not have opportunities for student development.

Different types of human activity lead to the formation of different traits and qualities of personality. However, all this does not affect the formation of a personality equally. At different ages, one of these activities allows to meet a person's needs as the main, leading type of activity, and the other acts as an ancillary activity. Consequently, the special organization of the main type of activity plays the role of conditions that allow to purposefully influence the personality of the student, the formation of the necessary needs, motives, and goals in the process of that activity. Pedagogical literature deals with cognitive, social, artistic, and technical activities according to their direction. The following types of activities are indicated in the philosophical literature:

- 1) changing activity;
- 2) cognitive activity;
- 3) practical activity;
- 4) communicative activity;
- 5) assessment - orientation activity.

All these types of activities are involved in pedagogical activities. Activity can be active or passive. Even the youngest child can present himself or herself as an active

being. When necessary, the child demands from adults and peers, expresses his or her attitude to people and things. Later, this activity may increase or decrease under the influence of the environment and education. Good development can only be achieved through active, emotional activity. A person joins such an activity wholeheartedly, fully realizes his or her potential, manifests himself or herself as a personality. Such activity satisfies a person, turns him or her into a source of energy and inspiration. Activity in training helps to quickly and successfully master social experience, develops communication skills. The cognitive activity ensures the intellectual development of the child. Labor activity stimulates the rapid and correct formation of moral and spiritual qualities of the individual. The source of an individual's activity is his or her needs. Demand motivates a person to act, to work in a certain direction. That is why it is not just demand, it directs a person to activities that allow him or her to meet that need. The diversity of human needs also creates a variety of types of activities to meet them. Requirements are the source of activity motivation. Demands and motives are active and changeable. The types and nature of activities at different ages need to be changed expeditiously. Educational work in secondary schools does not keep pace with these changes so often.

A person's activity is an important condition for developing abilities and talents, for success in learning and upbringing. No matter how much a child is cared for at school, the child cannot achieve much without personal work. In a properly structured upbringing, the student is the object and subject of pedagogical influence and personal upbringing. The development of a person does not occur under any influence but mainly under the influence of needs,

referring to the person's attitude to existence.

Personality activity is not only the basis for the development, but also the result of development. If education forms an active, enterprising, creative personality who brings joy to himself or herself and people, it will have achieved its goal. With this purpose, the child should be involved in various activities, and the leading type of activity should be effectively used at this or that age.

In pedagogical practice, there is a need to provide an operative diagnosis of students's level of development. This is because it is impossible to effectively manage the process of personality formation without a deep knowledge of the pace and nature of change. **Diagnostics** (It's a greek word and means: "*dio*" - transparent and "*gnosis*" - knowledge) is a general method used to obtain preliminary information about the object or process being studied.

**Check yourself.**

**1. People differ in:**

- A) biological, physiological, individual-psychological characteristics.
  - B) biological, physiological characteristics
  - C) individual-psychological characteristics.
  - D) physiological, individual-psychological characteristics.
  - E) individual-psychological, biological characteristics.
- A) B) C) D) E)

**2. Match the main directions related to the development of personality in pedagogy and psychology with the thoughts of their representatives.**

- 1. *biological direction;*
- 2. *sociological direction;*
- 3. *biosocial direction;*

- a) According to the representatives of this direction, although mental processes (feelings, perceptions, thinking, etc.) have a biological nature (properties), the experience, political, moral, spiritual views, interests, abilities, etc. of the personality are formed as social events.
  - b) Representatives of this direction consider the personality as a purely natural being, explain all the behavior of a child by the influence brought with the child at birth, the child's peculiar needs, interests, instincts.
  - c) Representatives of this direction, acknowledging the fact that a child is born as a biological being, defend the idea of gradual socialization under the influence of the social groups with which the person interacts. Social development of the person begins with integration into society.
- A) 1c; 2a; 3b   B) 1a; 2c; 3b   C) 1b; 2c; 3a  
D) 1b; 2a; 3c E) 1c; 2b; 3a**

**3. What is heredity?**

- A) Heredity is the inheritance of only characteristics from parents to children.
  - B) Heredity is the inheritance of characteristics from children to parents.
  - C) Heredity is the inheritance of only traits from children to parents.
  - D) Heredity is the inheritance of certain traits and characteristics from parents to children.
  - E) Heredity is the inheritance of only traits from parents to children.
- A) B) C) D) E)**

**4. The environments include:**

*I - social environment*

*II - family environment*

- a) means the external conditions surrounding human life and development.
- b) strongly impacts in human development, especially for young and school-age children.
- c) covers the social structure, industrial relations system, material living conditions, the nature of production and social processes.
- d) creates favorable conditions for realizing of their interests and needs.
- e) is constantly changing and renewing.
- f) the foundation for moral qualities of personality is also laid in it.
- g) the foundation for social qualities of personality is also laid in it.
- h) a person is not passive in it; the person is active, and changes his or her environment in the process of activity.

A) I - b, f, a, c

II - e, h, g, d

B) I - a, c, e, h

II - b, d, f, g

C) I - g, d, a, e

II - a, b, c, d

D) I - h, e, d, a

II - b, d, g, a

E) I - a, c, h, f

II - e, h, d, a

**5. Define the complete line of the types of activities?**

- A) changing activity, cognitive activity
  - B) practical activity, communicative activity
  - C) assessment - orientation activity.
  - D) changing activity, practical activity
  - E) changing activity, cognitive activity, practical activity, communicative activity, assessment - orientation activity.
- A) B) C) D) E)

6. One of the leading representatives of 'Double factor' theory is... .

- A) A.S.Makarenko
  - B) J.H.Pestalozzi
  - C) G.Stanley Hall.
  - D) V.A.Sukhomlynsky
  - E) K.D.Ushinsky
- A) B) C) D) E)

**List of recommended literature**  
**Chapter IV**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

2. Paulo Freire. Pedagogy of Freedom: Ethics, democracy, and Civic Courage Lanham, Md.: Rowman & Littlefield, c1998. 144 p. <http://abahlali.org/wp-content/uploads/2012/08/Paulo-Freire-Pedagogy-of-Freedom-Ethics-Democracy-and-Civic-Courage-2000.pdf>.

3. The Process of Personality Development <https://www.universalclass.com/articles/self-help/the-process-of-personality-development.htm>

4. Personality development. <http://www.Healthofchildren.com/P/PersonalityDevelopment.html>

5. Personal development process. <https://destinysodyssey.com/personal-development/personal-development-process/>

6. The Science of Personality Development. <https://lesley.edu/article/personality-development>

## CHAPTER V

### AGE AND INDIVIDUAL CHARACTERISTICS OF PERSONALITY DEVELOPMENT

#### *5.1. Age periods*

Physical and mental development is closely connected with age. Each age period has its own physical, mental and social development level. This level is general, but there may be delay or progress in the development of a particular person.

In order to properly manage the development process, educators have tried to classify the periods of human life in the distant past. There are a number of ideas about the division of development into periods Aristotle (384-322 BC), J.A. Comenius (1592-1670), J.J. Rousseau (1712-1778), and others. The number of proposed classifications is large and continues to grow. Therefore, it is impossible to upbuild an ageing system according to one criterion. Consequently, it is important to analyze the age classification accepted by most educators.

The age period is based on the separation of age characteristics. The anatomical-physiological and mental qualities specific to a certain period of human life are called **age characteristics**. The essence of age peculiarities manifests itself in the physical development of a person. The development of the child's height, weight gain, the eruption of deciduous teeth, and then their replacement, puberty, and other biological processes occur at a certain age (there may be some, slight delay or progress). The biological and spiritual development of a person is closely interconnected.

Consequently, the appropriate changes that occur at any age are also formed in the mental sphere. Mental changes do not occur as seriously as biological and social maturation. This is a natural basis for dividing human development into stages and determining age periods.

Separation of development into full periods covers the whole life of a person. Pedagogy is interested in the school-age of people.

In modern science, the following age periods of a child have been adopted:

1. **New born** (1 year); 2. **Infancy** (1-3 years); 3. **Pre-school period** (3-6 years): a) pre-school small-age period (3-4 years); b) pre-school middle age period (4-5 years); c) pre-school senior-age period (5-6 years); 4. **School age period** (6-18 years): a) small school-age period (6-10 years); b) middle school-age period (11-15 years); c) senior school-age period (16-18 years).

The basis of the pedagogical age is the stages of physical and mental development, on the one hand and the conditions created for education, on the other hand.

The stages of biological maturation of the organism, its nervous system and organs are objectively distinguished. The development of cognitive forces is also connected with this. Therefore, adequately organized educational work should be adapted to the characteristics of the age and based on them. Ignoring or denying the stages of natural development may lead to misconceptions.

Taking into account age characteristics is one of the main pedagogical principles. On these bases, teachers divide the workload by different types of labor. They determine the reasonable volume of teaching, favorable work, and day off regime. These types of work are also used to choose the

forms and methods of training and educational activities.

Specific age periods are conditional; the variability between them manifests itself, making it necessary to reconsider the boundaries between some age groups. The main reason for this is the process of **acceleration**, which is widespread throughout the world (**acceleration** comes from the Latin word **accelerationem**, which means ‘a hastening’). It manifests itself in the acceleration of physical and, to some extent, mental development in childhood and adolescence period. Biologists connected acceleration with the physiological maturation of the body while psychologists connected this with the development of mental functions, and pedagogues with the spiritual development and socialization of the personality.

Until the acceleration of the 50s and 60s of the twentieth century, there was a balance between children and adolescents’ physical and spiritual development. As a result of acceleration since the mid-70s, the physiological maturation of the organism preceded the mental, psychical and social development of human. As a result, there arose an inconsistency; the body grew rapidly, and the development of mental functions, underlying intellectual, social and moral qualities was decelerated. Studies show that the physiological maturation of girls between the ages of 13 and 15, and boys between the ages of 14 and 16, basically ends and almost reaches the level of an adult. The adult body requires to satisfy all the physiological needs of ‘adults’. Social development falls behind and comes into conflict with rapidly evolving physiology. Moreover, this leads to much psychological tension. The teenager looks for ways to overcome this and follows the path of an immature mind. This is the main contradiction of the acceleration. These contradictions create many difficulties for teachers and

educators who work with adolescents, who cannot cope with the changes that are taking place in them. The followings are among the main reasons for the acceleration:

- the overall speed of life, improvement of financial conditions;
- improvement of food quality and health care, improvement of

services for children at an early age;

- the eradication of many serious childhood diseases.

There are other reasons, too: radioactive poisoning of the human environment (which leads first to the development of the height, and then to the weakening of the gene pool), a decrease in oxygen in the atmosphere (this leads to the expansion of the thorax, the development of the whole organism). It can be assumed that the acceleration is due to the complex effect of many factors.

Since the mid-1980s, the acceleration around the world has begun to weaken, and pace of physiological development has begun to slow down.

### ***5.2. Inequality of development***

As a result of research on human development, a number of important objective laws have been revealed. It is impossible to properly plan and effectively organize the educational process without taking them into account. Practical pedagogy always refers to the following objective laws of physical development:

- 1) while the physical development of a person at a young age goes faster and more intensively, the speed of development begins to slow down as a person grows up;
- 2) as a child physically develops with inequality, the

development sometimes rapidly and sometimes relatively slow;

3) as each organ of the human body develops at its rate, different parts of the human body develop unevenly and disproportionately.

The spiritual development of a person is organically connected with physical development. There also occur significant changes in the dynamics of spiritual development. These changes are due to the inequality in the maturation of the nervous system and the development of mental functions.

1. There is an inverse proportionality between a person's age and the speed of spiritual development: the younger the age, the higher the rate of spiritual development, and the slower the spiritual development as a person gets older.

2. The spiritual development of people is uneven. In any case, even in the most favorable conditions, the mental functions and properties of such a personality (they are based on spiritual qualities) are not at the same level of development. At some stages of development, more favorable conditions are created for the development of certain qualities, and some of these conditions have a temporary, transient character.

3. There is an optimal period for the formation and development of certain types of mental activity. The development of spiritual qualities is due to these types of mental activity. Age periods with optimal conditions for the development of certain qualities are called **sensitive** periods. The reason for the increased sensitivity is the uneven development of the brain and nervous system. American psychologists have determined that the period from 6 to 12 years is a sensitive period. This is the time to develop the necessary skills to solve problems. If this period is missed, it will be very difficult for a person to master the techniques of

a high level of thinking. Nature has allotted a sensitive period for the formation of each quality. The early school age can be considered a sensitive stage for the development of motor skills, and the high school age can be considered a sensitive stage for the development of logical memory and abstract thinking.

4. As development progresses, the human psyche and its spiritual qualities become stable. Nevertheless, they retain their plasticity and regenerative capacity. This is the manifestation of the complex dialectic of human development.

Modern science considers that the abilities of 'wunderkinds' develop in one sphere at an early age. However, they are different from other normal children. A gifted child spends less time on solving problems than others. The child gets positive emotions for his success. These emotions easily restore the energy spent on solving the problem.

### ***5.3. Junior school age period (6-10 years)***

When a child reaches school age, his activity, communication and relations with other people change sharply. Learning becomes his leading activity, his lifestyle changes, new responsibilities arise, and new relationships are formed with the people around him.

Many new qualities are formed in the still weak body of young children. Compared to pre-school age, height development slows down and weight gain significantly increases. At this age, ossification occurs in the skeleton, but is not yet completed. If it will be left out of attention, a child's spine can easily bend. In this period, the child's muscular system develops intensively, muscle strength increases significantly.

As a result, the child quickly acquires writing skills. During this period, children's nervous system improves, the functions of the cerebral hemispheres develop intensively, and the analytical and synthetic functions of the cerebral cortex are strengthened.

At this period of age, a child's brain weighs almost as much as an adult's brain and weighs 1400 grams. The child's psyche develops rapidly. The accuracy of the senses increases. Compared to pre-school age period, color sensitivity improves by 45%, joint-muscle sensitivity by 50%, and visual acuity by 80%. They find it difficult to pick out the subtle differences between things and events. At this age, children are quickly to understand the learning material that is explained with facts, examples, and visual aids. Pupils of 3rd-4th grades gradually begin to understand abstract notions due to the increase of vocabulary. Their cognitive activity occurs mainly in the learning process. This requires teachers to purposefully conduct the entire process of teaching and upbringing.

Although the perception of young students is not stable and organized, they perceive the world around them with enthusiasm and emotion. Relying on this, teachers train students to listen purposefully and develop their observation skills. School life requires a child to constantly practice voluntary attention, to make a voluntary effort to concentrate. Although their voluntary attention is somewhat stronger than in kindergarten, they are still unable to force themselves to do their homework and have difficulty concentrating on one task for a long time. At this age, children's attention is often distracted, their thinking develops from emotional-figurative thinking to abstract-logical thinking. Trainings rapidly develop their intellect. The attention of junior school-age children is not large, they are not able to focus on two things

at the same time. For example, they cannot speak while they write. Their thinking develops in interaction with speech. At this age, children's vocabulary increases, they have no difficulty in expressing their ideas orally and in writing.

Memory is of great importance in the cognitive activity of schoolchildren. The memory of junior school-age students is of more visual character. They memorize a large poem, the text as it is, but have difficulty expressing it in their own words. This feature of memory should be used to increase the vocabulary of children. At the same time, the teacher should try to develop their logical memory. Students should be instilled with self-control skills, self-examination skills, and knowledge, necessary for the effective organization of educational work.

The formation of the personality of young students takes place under the influence of new relationships, new activities (reading, learning) and communication with teachers and peers (class and school staff). Junior school-age children have great opportunities for the formation of moral concepts and ideas. These opportunities should be used skillfully at school, and students should be involved in self-service, and social and useful labour. Such activities develop children's diligence, culture of behaviour, teamwork skills and comprehensive activity.

#### ***5.4. Middle school age period (11-15 years)***

At this age, children undergo very sharp changes. Adolescence age is characterized by the signs of both childhood and early youth period. This period coincides with the period of studying in the second stage of school, and is characterized by an increase in the overall vital activity and

the comprehensive development of the whole organism. This period is considered difficult for both the child and those, who are around him. This period is often called the 'crisis period'. At this stage, adolescents can not leave their years of childhood. Physically, they develop rapidly. The process of ossification of the skeleton continues, and muscle strength increases significantly. The internal organs develop unevenly, the development of blood vessels lags behind the development of the heart, which disrupts the harmony (rhythm) of its activity, which leads to an increase in heart rate. As a result of this disproportionate development of the heart and blood vessels, blood pressure rises slightly, blood flow to the brain is not normal, and as a result, the teenager gets tired quickly. The second important trait that characterizes adolescence period is puberty. This is due to the activation of the sex glands. Puberty begins at 11 years old in girls, somewhat later in boys at 12-13 years old, and ends early in girls. This process significantly changes the vital functions of the body, creates new feelings and emotions.

In adolescence period the development of the nervous system, the complication of the internal structure of the brain continues. This creates favorable conditions for the development of mental activity of adolescents. The brain weight of a teenager differs little from that of an adult. The role of consciousness of it increases, the control of the cerebral cortex over instincts and emotions improves. However, delays in awakening processes still prevail.

At this age, the adolescent's perception becomes more purposeful, planned and organized, and differs in accuracy. However, they are not able to connect the perception of the world around them with the educational material. But they can spend a lot of time focusing on the events and material that are interesting to them.

At the age of adolescence, a child's mental activity progresses significantly. Thinking becomes more systematic, consistent and mature. There is a sign of criticism in the mind of a teenager. He tries to express his opinion, argues, protests, has a critical attitude to everything. This age is very favorable for the development of creative thinking. Therefore, children should always be given problem-based work, instructed to make comparisons, and to identify cause-and-effect relationships in events and processes. The development of thinking is inseparably linked with the speech of a teenager. As a result of the development of thinking, speech becomes correct, logical, convincing, figurative and effective.

Adolescence is the age when intensive moral and social formation of personality occurs. In this period, the student's worldview and moral principles are not yet stable. In addition to their positive qualities, they have wrong, immature, and even immoral behavior. Teenagers (adolescents) want to behave like older people.

Adolescence age period has a number of contradictions. These contradictions are characterized in the pedagogical literature as follows:

1. Adolescents try to be uncompromising against evil and lies, but are unable to cope with the complexities of life.
2. Adolescents are eager to study well, ideally, but do not want guardianship.
3. Adolescent wants to prove himself, but can't.
4. When a teenager is in a deep need of help and advice, he avoids meeting with adults and does not dare to communicate with them.
5. Adolescent has rich forces, desires, but he faces certain difficulties due to the lack of experience, limited opportunities.

6. Addiction to the ideal and doubt that the ideal can exist in ordinary life, creates mistrust in the behavior of the adolescent.

7. Adolescent is amazed by the inexhaustibility of science, wants to know more, is inspired by intellectual work, and at the same time has a superficial attitude to daily educational tasks.

8. Adolescent is romantic, enthusiastic, cheerful, but he does not lack a little rude actions, and he considers it courage, bravery.

Among the strong, courageous and brave ideals of teenage boys, unfortunately, there are bandits and hooligans. Adolescents often commit serious crimes, because they imitate their actions. Some of today's teenage girls have serious flaws in their outlook on life. They often confuse traditional positive moral values with imaginary, and even anti-social values.

Properly organized bringing up plays an important role in preventing from these conflicts.

Emotions are especially important in the moral and social behavior of adolescents. If junior schoolchildren have impulsive emotions, then in middle school they become thoughtful and strong. In particular, the feeling of hatred is stronger. Many educators call this period a period of severe crisis. This explains the stubbornness, selfishness and indifference. Therefore, it is important to show much attention to the feelings of teenagers.

Adolescents have a tendency and interest in professions, they think about the importance and benefits of professions, try to master the profession they want. Most of them understand the meaning of clear and honest work, take a responsible approach to career choice and the future in general. At the same time, recent research shows that some

teenagers are indifferent and immature in this regard. The ideal of an honest worker, a hard worker loses its attraction. Relying on the physiological and psychological characteristics of the adolescent, it is very important to purposefully engage in his upbringing, and this is one of the most difficult tasks of our time. Directing their overwhelming efforts in the useful, right direction is the best way to prevent these teenagers from treating teachers, schools, and society coldly.

### ***5.5. Senior school age period (16-18 years)***

In this period, the anatomical and physiological development of student continues. The brain reaches the stage of full development. The growth of height and ossification of the skeleton ends, the development of the endocrine glands is completed. Muscle strength, as well as the ability to work increases significantly, the regulation of action is put in order and reaches the adults' level. The rate of elongation of the body is significantly reduced compared to the previous period: height increases by 1.5-2.5 cm, and weight increases by 2-4 kg per year. The first stage of puberty comes to an end.

This age period is also characterized as the first period of youth. This period is a period of determining the worldview, beliefs, character and way of life of young people. High school students have a selective approach to academic subjects. They successfully analyze the educational material, make generalizations, have no difficulty in drawing conclusions by reasoning, and easily understand abstract notions. The need for knowledge about their chosen profession is one of their characteristic traits. It determines the development and functioning of mental processes. So, in

youth period, perception is characterized by its directing features, attention by its voluntariness and stability, and memory by its logical traits. The thinking of high school students is characterized by a high level of generalization, abstraction, independence, logic, and gradually begins to take a theoretical and critical direction. This is the period of the rise of mental activity. In this period, mental processes are also significantly formed.

While boys pay more attention to physical training in adolescence period, high school students highly value intellectual qualities. Students with intellectual ability have a great reputation in the classroom. In this period, students also develop the ability to comprehensively assess the person, the number of admirers of comprehensively developed youth increases.

At this age, the moral and social qualities of students are formed rapidly. New conditions, that's, a change in the nature of activity, place in society and in the collective, the intensity of communication contribute to this formation. In this period, young people strive to take an active position in life, have a conscious attitude to public duty, try to make their words and deeds the norm of daily behavior. Moral concepts and categories are formed. They try to express their 'I', selfaffirmation and selfrealization, attract the attention of others around them, choose a profession. This in some cases causes the violation of certain etiquette.

In early adolescence period, there is a strong interest in ethical issues. The first love brings excitement into the lives of boys and girls, motivates them to solve difficult tasks. At this age of 'eternal' problems, i.e., the meaning of life, happiness, duty, conscience, honor, dignity, personal freedom, and other problems are of their great interest. At that age, students' conscious behavioral motives become stronger.

The place of a personality in a collective, the nature of communication and relationships among team members are of great importance. Collective connections and relationships expand. Young people's critical attitude to life deepens. They consciously try to regulate their actions. The criteria and the demand for teachers and adults differ. Young people differ greatly in their desires and aspirations, interests and intentions. But their desires and aspirations are the same in one thing: to take a worthy place in life, to work where they want, to earn their living, to start a happy family, and so on.

### ***5.6. Individual features***

There are general and specific features in human development. The general feature is peculiar to all people of a certain age. A specific feature of a person is called an individual trait. Human identity with clear, distinctive specific traits is called individuality. Individuality is characterized by a set of intellectual, moral, social and other features of personality. Every child has his own thinking, feelings, interests and abilities, ideals, volitional and characteric traits, temperament. These qualities significantly distinguish this person from others. It is difficult to find people on earth who are completely similar to one another. Even twins have distinctive features. Each person is unique in his individuality.

Individuality is manifested in individual characteristics. The formation of individual characteristics (differences) is associated with the fact that each person goes through his own special path of development. In this way, it acquires various typological features of the activity of the higher nervous system. Individual characteristics include the

uniqueness of emotions, perception, thinking, memory, imagination, peculiarities of personality interests, tendencies, abilities, temperament, character. Individual characteristics affect the development of personality. The formation of all personality traits largely depends on those characteristic features.

There is a serious disagreement among experts on the consideration of individual characteristics in the educational process. According to some researchers, public schools cannot and should not take into account individuality. The school cannot set up its own business for each child individually. All children should receive the same 'share' in the pedagogical process. There should be no difference in the upbringing of hard-working and lazy, talented and incompetent children. Students in one or another educational institution must receive education and upbringing in accordance with the standard accepted in that institution, which is the same for all.

And according to another group of researchers, upbringing should be mostly based on individualism. The individual approach, one of the classical principles of pedagogy does not aim to adapt the purpose of education and upbringing, its main content to individual characteristics, but it aims to adapt the forms and methods of pedagogical influence to the individual characteristics of children. The principle of individual approach, as an important principle, requires to guide the development of the personality on the basis of thorough knowledge of the characteristics and living conditions. An individual approach creates favorable conditions for the development of each student's cognitive abilities, activity, inclinations and talents. Children with difficult upbringing, children with disabilities, as well as children with developmental delays are especially in need of an individual approach.

**Check yourself.**

**1. Match the age periods with the years of age.**

1. Suckling;
  2. Infancy;
  3. Preschool period;
  4. School age period
- a) 3-6 years.
  - b) 1-3 years.
  - c) 6-18 years.
  - d) 1 year.
- A) 1d; 2b; 3a; 4c    B) 1a; 2c; 3b; 4d    C) 1b; 2c; 3a; 4d**  
**D) 1c; 2a; 3d; 4b    E) 1a; 2b; 3d; 4c**

**2. The age periods include:**

*I – Pre-school period*

*II - School age period*

- a) pre-school small age period (3-4 years).
- b) small school age period (6-10 years).
- c) pre-school middle age period (4-5 years).
- d) senior school age period (16-18 years).
- e) pre-school senior age period (5-6 years).
- f) middle school age period (11-15 years).

- A) I - a, b, f;            II - b, d, c;**  
**B) I - a, c, e;            II - b, d, f;**  
**C) I - d, e, a;            II -f, c, d;**  
**D) I - e, d, a;            II - b, f, c;**  
**E) I – a, c, f;            II - e, d, b.**

**3. According to ... acceleration associates with ...**

*1. Biologists*

*2. Psychologists*

*3. Pedagogues*

- a) the development of mental functions
- b) the physiological maturation of the body
- c) the spiritual development and socialization of the personality.

**A) 1b, 2c, 3a;    B) 1a, 2b, 3c;    C) 1b, 2a, 3c;**

**D) 1a, 2c, 3b;    E) 1c, 2a, 3b;**

**4. Practical pedagogy always refers to the objective laws of physical development:**

A) while the physical development of a person at a young age goes faster and more intensively, the speed of development begins to slow down as he grows up.

B) as a child develops physically unevenly, development sometimes rapidly and sometimes relatively slow.

C) as each organ of the human body develops at its own rate, different parts of his or her body develop unevenly and disproportionately.

D) while the physical development of a person at a young age goes faster and more intensively, the speed of development begins to slow down as he grows up; as a child develops physically unevenly, development sometimes rapidly and sometimes relatively slow; as each organ of the human body develops at its own rate, different parts of his body develop unevenly and disproportionately.

E) as a child develops physically unevenly, the development sometimes rapidly and sometimes relatively slow; as each organ of the human body develops at its own rate, different parts of his or her body develop unevenly and disproportionately.

**A)   B)   C)   D)   E)**

**5. Adolescence age period contradictions are:**

- A) Adolescents try to be uncompromising against evil and lies, but are unable to cope with the complexities of life.
- B) Adolescents are eager to study well, ideally, but do not want guardianship.
- C) Teenager wants to prove himself, but can't.
- D) When a teenager is in a deep need of help and advice, he avoids meeting with adults and does not dare to communicate with them.
- E) All are true.

**A) B) C) D) E)**

**6. Adolescence age period contradictions are:**

- A) All are true
- B) Adolescent has rich forces, desires, but he faces certain difficulties due to the lack of experience, limited opportunities.
- C) Addiction to the ideal and doubt that the ideal can exist in ordinary life, creates mistrust in the behavior of the adolescent.
- D) Adolescent is amazed by the inexhaustibility of science, wants to know more, is inspired by intellectual work, and at the same time has a superficial attitude to daily educational tasks.
- E) Adolescent is romantic, enthusiastic, cheerful, but he does not lack a little rude actions, and he considers it courage, bravery.

**A) B) C) D) E)**

## **List of recommended literature**

### **Chapter V**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. Retrieved from: [https:// books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC](https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC)
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3. Personality development in the context of individual traits and parenting dynamics. [https:// www.ncbi.nlm.nih.gov/pmc/articles/PMC6411068/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6411068/)
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## CHAPTER VI

### PEDAGOGICAL PROCESS

#### 6.1. Pedagogical process as a system

The interaction of teachers and students to achieve a goal is called a **pedagogical process**. This interaction leads to a change in the condition and quality of students in a predetermined way. In other words, the social experience acquired in the pedagogical process becomes the quality of the personality. In the pedagogical literature of previous years, they mostly used the notion of 'educational process'. Studies show that this notion is narrow, incomplete, and does not reflect the entire complexity of the process, above all, its completeness and generality. Ensuring the unity of teaching, education, upbringing, and development on the basis of completeness and generality is the main essence of the pedagogical process. In the recent pedagogical literature, these notions are presented as a complete pedagogical process. This is natural, because teaching, education, and development are not separate processes. They are inseparable aspects of a single pedagogical process that serves the same purpose.

*The pedagogical process is a complete, complex, and dynamic system.*

It also consists of many subsystems: the teaching process, the educational process, the formation process, the development process, the teacher-student cooperation process, the system of conditions of the pedagogical process, the system of forms and methods of the pedagogical process,

etc. The education system as a whole, including schools, classrooms, teaching sessions, each separately acts as a system of pedagogical process. Each of the system operates under certain conditions (natural-geographical, social, cultural). Each system also has specific conditions (material and technical base of the school, sanitary and hygienic condition, moral and psychological environment, aesthetic design, etc.).

**The pedagogical process is characterized by its goals, objectives, content, methods, results obtained through interaction between teachers and students.** Goal, content, activity, and result are the components that make up the system.

**The component of the goal** combines all the various purposes and objectives of pedagogical activity.

**The component of content** reflects the meaning of both the general goal and the specific task.

**The activity component** reflects the interaction between teachers and students, their cooperation, organization, and management of the process. In the pedagogical literature this component is also called the organizational or organizational-managerial one.

**The component of the result** is characterized by the efficiency of the process and the achievements in accordance with the set goal.

There are connections between the components of the pedagogical process. Information, organizational-activity, communicative, managerial, and self-governing relations manifest themselves in the process of mutual pedagogical influence. This relationship is of particular importance for the pedagogical process.

**The pedagogical process is a labor process.** It is carried out to achieve the goals of public importance, like any

working process. The specificity of the pedagogical process is that, here, the labor of educators and students unites, a unique relationship of pedagogical influence arises.

### ***6.2. Stages of the pedagogical process***

There are three main stages of the pedagogical process: **preparatory**, **main**, and **final** stages.

At the **preparatory stage** of the pedagogical process, the necessary conditions are created to take place in the intended direction and speed. At this stage, the following essential tasks are performed: setting the goals, diagnosing the situation, predicting the achievements, planning the development of processes, etc.

The **main stage** of the pedagogical process combines the important interrelated elements. This stage itself is a system that is relatively isolated from other systems. It consists of the following elements:

- defining and explaining the goals and objectives of the future activity;
- interaction of teachers and students; intended methods, means and forms of pedagogical process;
- creation of favorable conditions;
- taking various measures to stimulate the activities of schoolchildren;
- ensuring the connection of the pedagogical process with other processes.

The effectiveness of the pedagogical process depends on the purposeful interaction of these elements, their direction and practical implementation, and the fact that they do not contradict the common goal and each other.

The **final stage** of the pedagogical process ends analyzing

the results obtained. When analyzing, the educator draws conclusions from mistakes made, learns, and develops. Therefore, serious analysis and introspection are the most important condition for improving pedagogical skills.

### ***6.3. Innovations in the pedagogical process***

**Innovation** (the word ‘*innovation*’ is derived from the Latin verb *innovare*, which means *to renew*) means the use of a new idea or method in the broadest sense in the pedagogical system to improve the course and results of teaching, educational process. **Innovation** means novelty, occurs at the expense of the internal resources of the pedagogical system. So, everything that is imported cannot be called innovation. Innovation in a qualitatively improved pedagogical system combines ideas, processes, tools, and results.

The maximum efficiency of any pedagogical system cannot exceed 100%. The overall result is as follows: 50 percent of the indicator falls on the teacher and 50 percent on the student. So, this means that the effectiveness of the ‘worst’ pedagogical system, even if the teacher is inactive, cannot be less than 50 percent. The remaining 50 percent has been fought for, since ancient times. For many years, serious research has been conducted, and various proposals have been put forward to improve work efficiency and increase productivity up to 100 percent. However, there is still no decisive victory in this direction. The efficiency of the traditional pedagogical system does not exceed 60%. This means that the school can achieve the assimilation of the program material by a little more than half of its students.

There are two main ways to improve the pedagogical system: **an intensive way** (derived from the French word ‘*intensif*’, which means to strengthen, increase productivity)

and an **extensive way** (derived from the Latin word 'extensivus', which means to expand, to extend).

*The intensive way intends to develop the pedagogical system at the expense of internal resources.*

*The extensive way is based on involving additional forces (investments), new tools, equipment, technologies, capital investments, etc. to develop the pedagogical system.*

The Western school is developing extensively. It increases the quantitative indicators of the pedagogical product through new information technologies, redistribution of time between different types of educational activities, differentiation, and individualization of classwork.

Combining intensive and extensive ways of developing the pedagogical system (integration of innovations) requires a careful study of the unused resources of the system. Perhaps the effectiveness of the pedagogical system can be improved this way.

#### **6.4. Optimization of the pedagogical system**

Optimization of training and the educational process is a general innovation that belongs to the pedagogical system. **Optimization** (optimum - the best) is the process of choosing the best possible option. In such a complex, dynamic, multifaceted pedagogical system, there are many possible options for establishing, course and organization of training, educational process and achieving of the goals set in this sphere. In specific circumstances, only one of them may be the best version. Finding it, i.e., the best version is the main task of optimization. Optimization should be consistent with the goal of the pedagogical system. Because the system is created to achieve that goal. Optimality obtained in one condition may not be suitable for another. Because the notion

of optimization is always specific. There are theoretical and practical directions for optimization.

**Theoretically**, the synonymous variants of the notion of ‘optimization’ are considered and compared.

**In practical terms**, ‘optimization’ is understood as the pedagogical system’s innovation, reorganization and reconstruction, bringing it to the best possible state for solving the assigned tasks. The educational process is considered optimal when students and teachers are not overloaded, and the maximum result is achieved. Experience shows that overload teachers and students reduce their ability to work and it adversely affects their health. According to the current norms, homework for the 1<sup>st</sup>-grade students is 1 hour per day, for the 2<sup>nd</sup>-grade students 1.5 hours, for the 3<sup>rd</sup>-4<sup>th</sup> grade students 2 hours, for the 5<sup>th</sup>-6<sup>th</sup> grade students 2.5 hours, for the 7<sup>th</sup>-grade students 3 hours, for the 8<sup>th</sup>-9<sup>th</sup> grade students 4 hours. Considering the abnormal health of most schoolchildren, it is advisable to reduce these norms (especially in the 1<sup>st</sup>-4<sup>th</sup> grades). Students are no longer given homework in the 1<sup>st</sup> grade.

### ***6.5. Child-oriented pedagogy – inclusive educational approach to students in the pedagogical process<sup>1</sup>***

#### **Inclusive education.**

It is known that education is an essential factor influencing social processes and serves to form the qualities and values that determine personality. Education guarantees the equal right to education for all members of society, both healthy and disabled. This would create conditions for the

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<sup>1</sup> See details: **Sevinj Rustamova**. School experiences of students with special educational needs (SEN) in inclusive education settings in Azerbaijan. Baku: Elm və təhsil, 2021, 144 p.

protection of social equality in society. Only inclusive education can create such an opportunity.

Inclusive education is defined as students with learning difficulties or disabilities having access to mainstream education on an equal basis with others for progression. Thus, learners participate in education to improve the quality of life and integrate into society, regardless of their learning difficulties, or disabilities. The concept of inclusive education mainly covers three aspects:

- Children with disabilities improve their academic and social skills as well as their self-esteem. Besides that, non-disabled peers will improve a caring attitude and understand society's diversity, and gain academic skills.

- Most countries almost adopt the inclusive education concept that children with disabilities have a right to be taught with their peers, which have been accepted as a matter of equity and social justice.

- Inclusive education is economically applicable, including transportation and accommodation of those children.

The concept of inclusion in the general education system means including certain groups of children in secondary schools, and creating opportunities for the system itself to cover children with a wide range of abilities and special educational needs. This includes legislation, funding, special services and infrastructure in schools, planning and conducting lessons, and teaching methods and strategies. It is not just the physical inclusion of children with disabilities in general education schools. Inclusive education (inclusive training) implies the right of every child to participate in the learning process together with others in the classroom. Racial and gender differences and special differences and different abilities do not affect this right.

Article 24 of the UN Convention on the Rights of Persons with Disabilities provides a more appropriate definition of disability. The Convention recognizes the right to education for persons with disabilities and imposes obligations on states to promote inclusive education. This commitment includes the followings:

- ensure that children with disabilities attend general education schools;
- ensure the opportunity to receive inclusive, high-quality, and free primary and general secondary education on an equal basis with other members of society;
- to ensure full participation, create the necessary conditions adapted to individual needs in an environment conducive to academic and social development.

Any form of segregation or exclusion from the educational process, such as children with disabilities in special schools or special groups of mainstream schools and incomplete integration, is not part of inclusive education.

As one of the countries that signed the Convention “on the Rights of Persons with Disabilities,” Azerbaijan has also committed itself to introducing inclusive education. A number of significant measures have been implemented to address the shortcomings in the implementation of inclusive education. The State Program for the Development of Inclusive Education for Persons with Disabilities in the Republic of Azerbaijan in 2018-2024 was adopted in 2017 to ensure equal access to education.

Inclusive education must not transmit academic knowledge but strengthen learning capacities. Inclusive education awakes children into the differences of society and teaches them how to live with that. Existed studies show that children with disabilities enrolled in maintain schools are advantageous for everyone. Integration of children with

disabilities into the education system helps to shape the society: evolve of the society and build the tolerant society in which future generations will live in harmony with each other regardless of any differences.

So, the development of inclusive education is one of the priorities of education policy in many countries of the world and, in general, aims to comply with international principles and standards of the education system of any country.

For effective inclusive education, it is necessary to create an appropriate atmosphere in the classroom. The child-oriented approach to the learners should accompany it.

**Child-oriented pedagogy.**

School teachers work with children who have different knowledge, skills, interests, and learning needs. Since there is no specific teaching method for children with disabilities, educators use child-oriented pedagogy in an inclusive environment to meet the needs of all children. In a traditional environment, or rather in teacher-centered pedagogy, the teacher, standing in front of the students sitting at the desks arranged in columns, gives them ready knowledge, commenting on whether their answer is correct or wrong. All mentioned above are the peculiarities of a 'good' teacher. In a child-oriented approach, the main condition for effectiveness is the teacher's pace and address. Depending on the situation, the teacher is in the appropriate places in the class, uses the resources, establishes contact with the children, and evaluates the knowledge they have acquired.

**The basic features of child-oriented pedagogy are as follows:**

**Useful learning opportunities:**

Students are more motivated to understand the purpose of lessons and school activities. It is necessary to connect the

educational process with the daily life of children. This is possible in an unconstrained (informal, relaxed) atmosphere where the child feels safe both when communicating with the teacher and other children. If the teacher can build confidential (trusting) relationships with students and knows their needs, it will be useful and interesting for them. There are the following opinions regarding the creation of this kind of relationship:

- building a lesson based on the students' previous knowledge and skills. Teachers should know their students very well and create all the lesson conditions for their active participation and demonstration of their knowledge.

- refer to children's everyday experiences when explaining new concepts. This will increase the relevance of the lesson for children. It is appropriate to inspire students to bring things from home to share their experiences and stories. Also, the teacher must be aware of the living conditions and culture of the students.

- make learning effective by allowing children to experience what they have learned in everyday situations.

- association of knowledge gained by students in one subject with knowledge gained in another subject. Most of the subjects are interconnected, and demonstrating these connections is important.

**Principles of inclusive education.**

1. The value of a student do not depend on his or her abilities and achievements;
2. Everyone has the ability to feel and think;
3. Everyone has the right to communicate and to be listened to;
4. All people need each other;
5. True education can only exist in the context of real relationships;

6. All people need the support and friendship of their peers;

7. The development of all students depends on their knowledge and skills;

8. The diversity of people develops all areas of life.

In doing so, it ensures the sustainable education and development of people.

In addition to the principles on which it is based, the inclusive education approach also includes some features. Thus, an inclusive approach to teaching encourages the search for optimal opportunities to meet different needs and take differences into account covering mental and physical capabilities. This approach not only meets the interests of students with different interests and skill levels, but also promotes the professional development of educators.

### **Check yourself**

#### **1. Match appropriate components to their definitions.**

1. *The component of goal;*

2. *The component of content;*

3. *The component of activity;*

4. *The component of result.*

a) ... reflects the interaction between teachers and students, their cooperation, organization, and management of the process. In the pedagogical literature, this component is also called the organizational or organizational-managerial one.

b) ... is characterized by the efficiency of the process and the achievements in accordance with the set goal.

c) ... combines all the various purposes and objectives of pedagogical activity.

d) ... reflects the meaning of both the general goal and the

specific task.

- A) 1c; 2d; 3a; 4b    B) 1a; 2c; 3b; 4d    C) 1b; 2c; 3a; 4d  
D) 1c; 2a; 3d; 4b    E) 1a; 2b; 3d; 4c

**2. Define the elements of the main stage of the pedagogical process:**

- A) intended methods, means, and forms of pedagogical process; creating favorable conditions.  
B) taking various measures to stimulate schoolchildren's activities, ensuring the connection of the pedagogical process with other processes.  
C) defining and explaining the goals and objectives of the future activity; interaction of teachers and students.  
D) defining and explaining the goals and objectives of the future activity; interaction of teachers and students; intended methods, means and forms of pedagogical process; creation of favorable conditions; taking various measures to stimulate the activities of schoolchildren; ensuring the connection of the pedagogical process with other processes.  
E) creation of favorable conditions; ensuring the connection of the pedagogical process with other processes.  
A)    B)    C)    D)    E)

**3. According to the current norms, homework for:**

- 1 - the 1<sup>st</sup>-grade students  
2 - the 2<sup>nd</sup>-grade students  
3 - the 3<sup>rd</sup>-4<sup>th</sup> grade students  
4 - the 5<sup>th</sup>-6<sup>th</sup> grade students  
5 - the 7<sup>th</sup>-grade students  
6 - the 8<sup>th</sup>-9<sup>th</sup> grade students  
a) 1.5 hours per day.  
b) 2.5 hours per day.  
c) 1 hour per day.

- d) 4 hours per day.
- e) 2 hours per day.
- f) 3 hours per day.

- A) 1-a; 2- c; 3- b; 4-e; 5-f; 6- d;
- B) 1-c; 2- a; 3- e; 4-b; 5-f; 6- d;
- C) 1-e; 2- a; 3- c; 4-b; 5-d; 6-f;
- D) 1-b; 2- a; 3- e; 4-c; 5-f; 6- d;
- E) 1-d; 2- a; 3- e; 4-b; 5-f; 6- c;

**List of recommended literature**  
**Chapter VI**

1. **Sevinj Rustamova.** School experiences of students with special educational needs (SEN) in inclusive education settings in Azerbaijan. Baku: Elm və təhsil, 2021, 144 p.

2. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

3. Paulo Freire. Pedagogy of Freedom: Ethics, democracy, and Civic Courage. Lanham, Md.: Rowman & Littlefield, c1998. 144 p. <http://abahlali.org/wp-content/uploads/2012/08/Paulo-Freire-Pedagogy-of-Freedom-Ethics-Democracy-and-Civic-Courage-2000.pdf>

4. Purposeful pedagogical process. The pedagogical process is a definition in pedagogy. <https://ik-ptz.ru/en/geometry/celenapravlenyi-pedagogi-ches-kii-process-pedagogicheskii.html>

## CHAPTER VII

### HISTORICITY AND MODERNITY IN EDUCATION SYSTEMS

#### *7.1. Training systems and training models*

Training is teaching or developing in oneself or others any skills and knowledge related to specific functional competencies. System is a Greek word ‘*systēma*’ and means ‘whole concept made of several parts or members’, or a group of interacting or interrelated entities that form a unified whole. A training system means a whole, complete institution selected according to specific criteria. A group or family of coursework will achieve a stated series of teaching objectives. Training systems are characterized by the internal integrity and completeness of the structures created by the unity of the goals, objective laws, organizational principles, content, forms, and teaching methods. The specificity of the structures allows to distinguish between three training systems that differ in principle:

- 1) J.F.Herbart's training system;
- 2) J.J.Dewey's training system;
- 3) Modern training system.

The German philosopher and educator J.F.Herbart (1776-1841) critically considered the traditional classroom system of J.A.Comenius and created a system based on the theoretical achievements of ethics and psychology. The main features of J.F.Herbart's training system are as follows:

1. The school's main task is to take care of the intellectual development of students.
2. The highest goal of education is to form a moral

personality, a strong character.

Proper pedagogical guidance, discipline, and appropriate training contribute to the forming morally strong characters. The task of the management staff is to ensure the regular activity of students, their training, to observe their physical and intellectual development, to accustom them to the rules. The essence of educational training is to closely coordinate teaching with discipline, to combine knowledge with the development of feelings and will of students. By introducing this concept to science, Herbart wanted to emphasize that education is inseparable from teaching, and that a person's will and character develop simultaneously with his mind.

J.F. Herbart's main contribution to pedagogy was identifying the stages of teaching or training. His scheme is as follows: clarity - association - system - method. Training process goes from theoretical concepts to comprehension and from comprehension to skills. Apparently, there is no practice in this scheme. These formal levels do not depend on the content of the training, and they determine the course of the teaching process at all lessons and on all subjects.

According to modern pedagogy, Herbart's didactic system did not have much influence on the development of the school. According to him, *teaching aims to give students ready, prepared knowledge: that is, the teacher should be active in the teaching process, and students should sit quietly and listen carefully*. The teacher must follow the same pattern for all lessons. Nevertheless, Herbart's didactics have influenced the development of modern theory and practice development.

American philosopher, psychologist, and pedagogue John Dewey (1859-1952) contrasted his didactic system with the

authoritarian pedagogy of J.F.Herbert. According to him, *such a pedagogy contradicted the progressive development of society and school.*

According to J.Dewey, properly organized teaching should be problematic. The teacher must closely monitor the development of the students' interests and set appropriate tasks and problems, taking into account their strengths. Students, in their turn, need to make sure that they are discovering new and valuable knowledge for themselves by solving the problem.

Compared to J.F.Herbert's 'traditional' system, J.Dewey proposed resolute innovations. Instead of 'reading from a book', he put forward the principle of active learning, which is based on the personal cognitive activity of students. The teacher who gave prepared knowledge to students was replaced by a teacher-assistant who helped the students to overcome the difficulties. Instead of stable curricula for all, approximate curricula were introduced. Theoretical and practical exercises replaced oral and written questionings. More attention was paid to students' independent research.

Despite being innovative in many areas, J.Dewey's learning theory was not without its flaws. Therefore, J.Dewey's ideas 'to build the learning process only in a problematic way' and J.Herbert's 'to build the learning process only by verbal methods' did not fully succeed in pedagogical practice. The limitation of Dewey's progressive didactics was that students did not participate in the process of consolidating knowledge. Incomplete 'projects' and courses that replaced the programs and were common to all students provided neither continuity nor systematization in learning.

Theories of *material* and *formal* education have influenced on the nature of education and the formation of

the content of education. According to the supporters of material education, *the school's main task is to give students as much knowledge as possible in various fields of science. The graduate of school must have encyclopedic knowledge.*

Many prominent pedagogues of the 19th century advocated material education. Many of the most prestigious educational institutions in Europe, including the classical gymnasiums in Russia, had adopted the encyclopedic model. And today, there are supporters of the same model. Along with the advantages, material education also has disadvantages. These manifest themselves in the weak connection between subjects, loading students with teaching material that is not necessary for their development. Curricula can only be designed in a linear scheme.

Supporters of didactic formalism are based on an ancient aphorism: 'To know much does not give much to the mind'. German scientists A. Diesterweg, J. Herbart, I. Kant, Swiss psychologist J. Piaget and others took the position of didactic formalism. Supporters of didactic formalism focused on developing the attention, memory, thinking abilities, and cognitive interests of students. The weakness of their position is that they chose 'instrumental subjects' - Latin and Greek languages, mathematics, physics - as a tool for the development of these qualities and could not appreciate the importance of the humanities in the comprehensive formation of the personality.

Supporters of the theory of *didactic utilitarianism* G. Kerschensteiner, J. Dewey and others preferred the individual and social activity of the student. In their opinion, the students should be engaged in activities that reach the civilization level of their time. Therefore, it is necessary to pay attention to constructive activities: to teach children

cooking, sewing clothes, handicrafts, etc. General information is gathered around the utilitarian knowledge and skills. Didactic utilitarianism has strongly influenced both the content and the methods of the American school.

The Polish scientist Bogdan Suchodolski (1903-1992), the author of the didactic problem-complex theory, proposes a complex study of separate subjects, but not in isolation. According to this theory, it is necessary to choose such problems for students' cognitive activity, the solution of which could require the use of knowledge in various fields. This theory is very similar to the 'project method' known from the history of pedagogy.

According to the author of the theory of *didactic structuralism*, Polish scientist *Kazimir Sosnitsky*, the content of education should be presented in the form of large structures. This is where the name of the theory comes from. The author believes that overcoming the weight of the content of education, reducing the amount of teaching material without compromising the quality of education is possible only by presenting the content in the form of large structures.

The analysis of the didactic systems of J. Herbart and J. Dewey shows that they did not meet the requirements of a rapidly developing life. Subsequent research has preserved the advantages of traditional and advanced systems. As a result, a new didactic system was created.

There is a noteworthy concept of teaching 'through discoveries' among the new directions in didactics, developed by the famous American psychologist and pedagogue *Jerome S. Bruner* (1915-2016). According to this concept, students must understand the world with their discoveries and acquire knowledge. Such discoveries require students to be mentally challenged and have a very effective

influence on the development of productive thinking. According to J. Bruner, the hallmark of creative learning is the collection and evaluation of knowledge on a particular topic, on the basis of which appropriate generalizations are made, and the detection of patterns that go beyond the educational material.

### ***7.2. The goal of education. State standards of education***

The goal of general education derives from the state's goal in the field of education and is considered part of it.

Education is the basis of society and the state's spiritual, social, economic and cultural development. Education aims to form an independent, free, cultural, and moral personality who understands his responsibility to the family, society, and the state respects the rights and freedoms of others.

The main tasks of secondary school are as follows:

- 1) to meet the educational needs of the population, to train a physically and morally healthy generation;
- 2) to ensure the assimilation of the knowledge system determined by the needs of society and production;
- 3) to form the scientific worldview, political, economic, legal culture, humanistic values and ideals, creative thinking of young generation;
- 4) to instill in young people a well-thought-out position of citizenship, human dignity, a sense of responsibility, efforts to participate in the work of democratic self-government.

The goal of the educational process can not be equated with the general directions of state policy in the field of education, the objectives of the study of separate subjects, the goals of educational institutions.

The goals of the teaching process sometimes do not

coincide with the results. For example, although the set goal is to achieve high performance in the teaching process, the results are low. This result is both visible and measurable.

Among the identified goals, there are those that cannot be measured directly. The development of students' activity, ability to work, ability to increase knowledge and social upbringing are taken into account in the goals, but it's impossible to measure them.

The notion of *standard* (it's an English word) is used in the meaning of norm, measure, example, or model. An educational standard *is a system of basic parameters that reflects the social ideal, considers the real potential of an individual and the education system to achieve this ideal, and is accepted as the state educational norms*. The requirements for the content of education in the Republic of Azerbaijan are determined by the main goal of the formation of today's and tomorrow's citizen. Educating citizens is one of the priority fields of state activity. Therefore, the education system of the Republic of Azerbaijan is improved, taking into account the global and local experience.

The state plays its leading role by creating and applying the state education standards. The state standards for full secondary education are defined as the state requirement for the level of education of high school graduates. Adherence to the state educational standards is mandatory for all educational institutions in the country, regardless of their subordination, type, and form.

The educational standard has two components:

1) **invariant (invariable) component**. This is the core of education. It is reviewed and changed from time to time.

2) **variable (changeable) component**. This component is systematically updated and revised depending on the needs of society.

The invariant part of the basic curriculum is the state component, and the variable part is the regional component (for national autonomous bodies).

State requirements for general education create virtually minimal conditions for the assimilation of education content by the stages of education (primary, general secondary, full secondary). Reaching these levels means fulfilling the intended goals. There are certain criteria and assessment standards for testing and assessing the level of proficiency of each student.

The educational standard also determines the general requirements for developing normative documents and their practical application in educational institutions. The main purpose of applying the standard is to prevent the decline in the level of education of citizens, create equal conditions for learning in all types of educational institutions, and determine the requirements for knowledge, skills and habits of students. The educational standard is a unique guarantee for obtaining a high level of education. Based on the standard, the diagnostics of everyone's learning level is carried out in a general, equal way. In this perspective, it is planned to conduct final tests for all high school graduates, regardless of ownership and subordination.

### ***7.3. The content of education***

*The content of education is a system of knowledge and skills selected for learning in a certain type of educational institution.* The content reflects the current and future needs of society and individuals as a means of achieving the goals of education. The formation of content and its inclusion in the programs of different types and educational institutions is

mostly directed by the needs. Among the systems that determine the formation of the content of education, the followings are selected:

- 1) accepted goals;
- 2) social needs;
- 3) social and scientific achievements;
- 4) personal needs;
- 5) pedagogical opportunities, etc.

**The social and personal needs system** is inextricably linked with the system of goals. Education should be the basis for building a democratic state, its cultural and spiritual revival, formation of market relations, the development of science and technology at the current stage of building a new school.

Traditionally, **the system of social and scientific achievements** is of great importance for forming the content of school education. Research in the field of application of scientific achievements in education shows that the time between the emergence of a new scientific discovery or a new social idea and its systematic study at school is constantly decreasing. Suppose, it took 60 years for the telegraph to be studied at school (inventor of the alphabet is Morse), 40 years for Popov's radio, and 30 years for the theory of the structure of the atom (Bohr's Model of Atom). In that case, students are told about the invention of the transistor 10 years later, they get acquainted with the study of space with the help of satellites, modern examples of various techniques after 4-5 years.

**The system of pedagogical opportunities** is a regulator that allows or prohibits access to information in the content of education. In the 70s of the XX century, the content of education in world didactics was improved by including complex sections (materials) in school curricula. But the

movement related to this failed. This again proved the necessity of considering the age characteristics of students and the need to review with them. Today it has been proved that a child can remember everything; the younger the child is, the more and faster the child remembers. Understanding, comprehending, assimilating is another side of the issue because they require a certain level of development.

Requirements for the content of education in secondary schools are determined by **the state strategy for education development**. The content of education is supposed to have two aspects: **national** and **universal**. National aspect includes the native language and literature, the history of the homeland, the physical and economic geography of the homeland, songs and music, and the rest is universal.

The general foundations for determining the content of school education are humanization, differentiation, integration, wide application of new information technologies, the formation of creative personality.

**The humanization of education** is carried out on the basis of the opportunities of not only the humanities, but also of all other subjects. Mastering the humanistic content leads to the formation of humanistic thinking, optimistic views on life and living problems, and students' understanding of the meaning of human life. The main role in the humanization of school is teaching language and literature, universal subjects. These subjects help children understand themselves and the world around them, behave, and acquire the skills of self-organization and self-regulation. The role of the knowledge gained from these subjects is great in forming the scientific view of the world, in understanding the interaction of students with society and technology.

Analysis of a large number of didactic sources allowed to

identify the general principles of formation of the content of school education.

Curricula should include information that take into account public and individual needs. The information should reflect contemporary content of great educational and cognitive value. The content should be chosen so that teachers can individualize their educational work, taking into account the interests and abilities of students.

The content of the teaching process can be presented in different structures as a system. At present, **the linear, concentric, spiral** and **mixed structures** of the content of education are widespread. The elements of the structure are separate knowledge or their elements (shares, steps).

**In a linear structure**, separate parts of teaching material are taught in close connection with each other, in a continuous sequence, once during the school teaching period. On the bases of this structure, it is necessary to follow the requirements of consistency, historicity, systematization, relevance. The linear structure of teaching material proves itself in teaching of history, language and literature.

**The concentric structure** implies a return to previously learned knowledge. The same material is repeated several times; at the same time, the content of the material gradually expands, it's enriched with new information, connections, and dependencies. In the early stages of teaching, basic ideas are given, knowledge and cognitive capabilities increase, and they are deepened and expanded. This structure is widely used in teaching of physics, chemistry, and biology.

The characteristic feature of **the spiral structure** is that here students do not ignore the initial problem, but gradually expand and deepen the range of knowledge associated with it. In spiral structure there are no breaks, unlike in the concentric and linear structure. There is no one-time study of

knowledge in spiral structure, extensive study continues. The spiral structure is more effective when determining the content of social, pedagogical, psychological sciences.

**Mixed structure.** Today, curriculum and textbook developers mostly take advantage of a more simple, **mixed structure**. It is a combination of linear, concentric and spiral structures. This combination helps to maneuver when organizing the content of education, to express its different parts in different ways.

When choosing the structure of the content of education, the goal of teaching, the requirements for students' level of learning, the nature and characteristics of the knowledge to be acquired, the characteristics of the groups of students to which the content is addressed are taken into account.

**Teaching plan.** The content of the teaching process is determined by the curriculum and subject curricula, and is reflected in textbooks, electronic equipment that collects and stores information (video disks, videocassettes, computer programs).

The teaching plan is a certificate of the educational institution. It determines:

- 1) duration of the academic year, quarters (semesters) and holidays;
- 2) complete list of subjects that are learned at the educational institution;
- 3) distribution of subjects by school years;
- 4) number of hours allocated to learning for each subject during the entire teaching period and in each class;
- 5) number of weekly hours devoted to the learning of each subject;
- 6) structure, duration of practicums, etc.

Socially accepted ideals of education, defined goals, the

concept of the formation of the content of education are reflected in a teaching plan. It is developed taking into account the objective laws of the educational process, sanitary-hygienic and organizational requirements, established traditions.

The subjects included in the teaching plan are divided into compulsory and optional (elective) subjects. As in many countries around the world, teaching plans in Azerbaijan are developed and approved by central education authorities.

**Educational programs, curricula.** Curricula for all subjects are developed on the basis of a teaching plan. Curricula include the followings:

- 1) an explanatory sheet on the tasks of learning the subject, the main requirements for the knowledge and skills of students, the recommended forms and methods of teaching;
- 2) thematic content of the material to be learned;
- 3) approximate number of hours that a teacher will spend on teaching different topics of the subject;
- 4) list of the main elements of the worldview;
- 5) instructions for establishing interdisciplinary and inter course links;
- 6) list of teaching equipment and visual aids;
- 7) recommended literature.

Due to the deepening of differentiation processes in education, various options (alternatives) of curricula are developed. The decision to use differentiated programs to create classes for in-depth study of the subject, or vice versa, is made by school councils. It is proposed to apply for the program in several versions in one subject in accordance with the interests and capabilities of students of any educational institution.

**Educational literature.** The content of education is

reflected in curricula, programs and educational literature. Educational literature includes school textbooks, reference books, supplementary reading books, atlases, maps, workbooks, etc. Learning outcomes depend on the quality of educational literature. Therefore, great attention is paid to the preparation of effective teaching aids, and well-known specialists are involved in their development.

A good textbook must meet all the requirements for the content of education. It should also be interesting, as short as possible, understandable, well-illustrated and aesthetically pleasing. The textbook must be both stable and mobile. The textbook must have a stable foundation in accordance with the stability requirements. Mobility allows the textbook to incorporate new knowledge without breaking the basic structure. The block construction of the textbook helps to achieve this goal. The requirements for the textbook are multifaceted and contradictory. That is why there is a need for good textbooks all over the world. Alternative (parallel) textbooks are published in economically developed countries. There are also several alternative textbooks for Azerbaijani schools. Teachers and students have the opportunity to choose the best of them.

The textbook should ensure students' conscious and active participation in the learning process, the full mastery of the teaching material. In connection with the solution of these tasks, the textbook performs the following didactic functions:

**1. The motivating function** is to create stimuli that motivate students to learn the subject, form interest, and a positive attitude to work.

**2. The information transfer function** is to allow students to expand their knowledge and gain access to

information, using all possible means to form their worldview.

**3. The control-corrective function** involves students checking the progress and results of training, creating opportunities for self-assessment and correction, and intends to carry out efforts to form and develop the necessary skills and habits. In addition to traditional teaching materials, paperless teaching materials are also widely used. These include video discs, videotapes, etc.

**Check yourself.**

**1. Who created a system based on the theoretical achievements of ethics and psychology?**

- A) J.A.Comenius;
- B) J.F.Herbart;
- C) J.J.Dewey;
- D) J.S.Bruner
- E) J.W.F.Piaget

**A) B) C) D) E)**

**2. Match the authors with their theories.**

*1. J.Dewey, G.Kerschensteiner;*

*2. Bogdan Suchodolski;*

*3. Kazimir Sosnitsky;*

a) didactic structuralism.

b) didactic utilitarianism.

c) didactic problem-complex theory.

**A) 1b; 2c; 3a    B) 1a; 2c; 3b;    C) 1c; 2b; 3a;**

**D) 1c; 2a; 3b    E) 1a; 2b; 3c;**

**3. The main tasks of secondary school are:**

A) to meet the educational needs of the population, to bring up a physically and morally healthy generation

- B) to ensure the assimilation of the knowledge system determined by the needs of society and production;
  - C) to form the scientific worldview, political, economic, legal culture, humanistic values and ideals, creative thinking of young generation;
  - D) to instill in young people a well-thought-out position of citizenship, human dignity, a sense of responsibility, efforts to participate in the work of democratic self-government.
  - E) All are true
- A) B) C) D) E)**

**4. Match the structure of the content of education with their definition.**

1. *Linear structure*
2. *Concentric structure*
3. *Spiral structure*
4. *Mixed structure*

- a) In this structure, students do not ignore the initial problem but gradually expand and deepen the range of knowledge associated with it. And here, there are no breaks, unlike in the concentric and linear structure.
- b) This structure implies a return to previously learned knowledge. The same material is repeated several times; at the same time, the content of the material gradually expands, it's enriched with new information, connections, and dependencies.
- c) In this structure, separate parts of teaching material are taught in close connection with each other, in a continuous sequence, once during the school training period. It is necessary to follow the requirements of consistency, historicity, systematization, and relevance requirements.

d) Curriculum and textbook developers mostly take advantage of a more simple structure as this one. It is a combination of linear, concentric, and spiral structures. This combination helps to maneuver when organizing the content of education, to express its different parts in different ways.

**A) 1a; 2c; 3b; 4d B) 1c; 2b; 3a; 4d C) 1b; 2c; 3a; 4d  
D) 1c; 2a; 3d; 4b E) 1a; 2b; 3d; 4c**

### **List of recommended literature Chapter VII**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu6legC>

2. Paulo Freire. Pedagogy of Freedom: Ethics, democracy, and Civic Courage. Lanham, Md.: Rowman & Littlefield, c1998. 144 p. <http://abahlali.org/wp-content/uploads/2012/08/Paulo-Freire-Pedagogy-of-Freedom-Ethics-Democracy-and-Civic-Courage-2000.pdf>

3. Models of Training Employees: Steps, Transitional and Instructional System Development Model. <https://www.yourarticlelibrary.com/training-employees/models-of-training-employees-steps-transitional-and-instructional-system-development-model/29548>

4. Standards in Your State. <http://www.Corestandards.org/standards-in-your-state/>

5. Educational Content definition <https://www.Lawinsider.com/dictionary/educational>

## CHAPTER VIII

### EDUCATIONAL CURRICULA

#### *8.1. The essence of the notion of 'curriculum'*

*Curriculum* literally means 'course' 'way', 'direction'. This word is explained in English-Russian dictionaries as 'teaching course', 'lesson plan', 'program'. Originally 'curriculum' is from New Latin and means 'a course of study'. It shares its ultimate root in classical Latin, where it means 'running' or 'course' (as in 'race course'), with words such as *corridor*, *courier*, and *currency*, all of which come from Latin 'currere' 'to run'. According to some sources, it has been used as a term since 1876. The first subject curriculum appeared in 1918 in the United States. Curriculum theory was formed after the 1970s. The term has been used in Azerbaijan since the end of the 90s of the last century.

Initially, it was translated and used as a teaching plan, but later it was used as a curriculum and in recent years as an educational program in normative and legal documents.

In 2006, in the framework document of the Concept of General Education (National Curriculum) in the Republic of Azerbaijan, the Curriculum was described as a conceptual document, that allows the effective organization, purposeful and consistent implementation of all activities related to the educational process. As a conceptual document, its content encompasses standards, necessary minimums, requirements for learners' preparedness, technology, and assessment issues. Each of these issues is included in the Curriculum as

an important component. The interrelation of these components, complementarity of each other, its logical continuation must be ensured as essential requirements.

The Law of the Republic of Azerbaijan “on Education” was adopted in 2009 and the curriculum was called educational program. Definition of the educational program defined as follows: Educational program (Curriculum) is a state document, that reflects the learning outcomes and content standards, subjects, the number of weekly teaching hours and extracurricular activities, organization of the pedagogical process, the system for assessing and monitoring of learning outcomes on each stage of education.

There are different approaches to the essence of curriculum. According to some sources, the Curriculum (plural curricula or curriculums) is broadly defined as what students experience in the educational process. Other groups of researchers believe that the Curriculum is the subjects that will be taught; the identified ‘mission’ of the school, and the knowledge and skills, that the school expects students successfully to acquire. The Curriculum is the combination of instructional practices, learning experiences, and students’ performance assessment that are designed to bring out and evaluate the target learning outcomes of a particular course. One more approach is that Curriculum is the expectations for what will be taught, and what students will do in a program of study. It includes teacher-made materials, textbooks and national standards. And formal definition is that the Curriculum is the courses that are taught by a school, college, etc.

All the versions of definitions, including the ones mentioned above, are acceptable. The most crucial point here is that when developing the curriculum, relying upon the state requirements for the education that are prepared considering

the needs of the society, it's necessary to take into account the issues that are relevant to the type of the educational institution, type of education, and so on.

Since the Curriculum is one of the foundational elements of effective schooling and teaching, it is often the object of reforms, most of which are broadly intended to either mandate or encourage greater curricular standardization and consistency across states, schools, grade levels, subject areas, and courses.

In connection with educational reforms in our country, we have also started curriculum reform. The reasons that made necessary curriculum reform in Azerbaijan are as follows:

- 1) the emergence of new public relations in society;
- 2) transition from a planned economy to a market economy;
- 3) integration into the world education system;
- 4) requirements of the information society;
- 5) formation of new views and approaches to the goals and objectives of education;
- 6) inconsistency of existing general education programs with modern requirements.

### ***8.2. Functions of national curriculum***

The National Curriculum provides the implementation of the following functions:

- ensuring connections and consistency between the levels of general education, the subjects taught at these levels;
- constantly improving and updating the content of subjects in accordance with the needs of society;
- ensuring flexibility and interactivity of teaching technologies;

- development and implementation of result-oriented subject curricula;
- ensuring the definition of the learning environment, the effectiveness of educational activities, the developmental and preventive nature of teaching, knowledge, skills and habits on the basis of a concentric principle on the levels of education;
- ensuring objective assessment and stimulation of student achievements.

In preparing this document, the *principles of national and universal values, demand-oriented, result-oriented, student-oriented, integrative, personality-oriented, democratic and humanist principles* were also taken into account.

The National Curriculum document includes requirements for general education and a person with general education, content standards of general education, number of weekly lessons on subjects in general education institutions, principles of organizing the pedagogical process in the general education system, assessment of student achievements in the general education system, the structure of subject curriculum.

In the document “State standards and programs (curricula) of general education stage” (2010), the word ‘curriculum’ is replaced by the word ‘educational program’. This document contains 2 issues in its content: 1) state standard of general education stage; 2) program of general education stage. Here, the notions of standard and curriculum are given separately. The state standards provide for the followings:

- the content of general education;
- general education management;
- general educational infrastructure;
- material-technical and educational base of general education;

- quality indicators of educators in the general education system;
- the level of knowledge, skills and habits, i.e., competence of students in the general education system.

The following parameters are expressed in the educational program (curricula):

- learning outcomes for general education levels.
- content standards for general education levels.
- subjects taught at the general education levels.
- the maximum amount of weekly teaching hours and extracurricular activities on general education levels.
- principles of organizing the pedagogical process in the general education system.
- monitoring and assessment of learning outcomes.

### **8.3. Types of curriculum**

Educational curricula are divided into two parts according to their nature: 1) subject-oriented; 2) personality-oriented.

**Subject-oriented curricula**, in terms of content, encompass the field of science, its perfect system of notions, and are directly aimed at assimilation of these notions. The **volume** and **amount of knowledge** play a vital role in the quality of such curricula.

**Personality-oriented curricula** are characterized by a preference for direct life skills and habits. According to this curriculum, the first plan is to form practical skills and habits, mental activity abilities, that will be needed in a person's future life.

Curricula that cover the characteristics of separate subjects as a whole are recognized and evaluated as **subject curricula**.

**Subject curricula:**

- maintain a balanced and comprehensive, integrated approach to learning different skills;
- allow reaching the level of content standards using active teaching methods;
- provide continuous assessment of students' knowledge and understanding, making adjustments during the school year;
- ensure the involvement of students in learning, preparation, and motivation for continuous education;
- predict the use of modern technologies in the education of students, assessment of the knowledge, literacy;
- have appropriate training resources and administrative support.

*Different types of curricula*<sup>2</sup> are used in world practice:

**1. Formal curriculum.** This curriculum document is formally approved by the state and local school councils and reflects the public interest.

**2. Understandable curriculum.** It is a curriculum designed for teachers, parents, and others. It is sometimes called the curriculum of mental abilities.

**3. Practical curriculum.** This document is intended to reflect what happened in and around the classroom. The document covers more teacher and student activities.

**4. Empirical curriculum.** This document focuses on expressing the real experiences of learners (students).

There is no single opinion in the pedagogical literature about the types of curricula. Some sources mention the following types: 1) formal curriculum; 2) comprehensive curriculum; 3) informal curriculum; 4) results-oriented

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<sup>2</sup> See: Kurikulum bələdçisi. İzahlar və tətbiqlər. Bakı: Elm və təhsil, 2019, p.163

curriculum; 5) integrated curriculum; 6) subject-based curriculum.

Most scholars divide curriculum into *the international curriculum* (or interpreted curriculum) and the *hidden curriculum*.

**Hidden curriculum.** It is called a hidden curriculum because it is more distinguished by its closed sides. Experts who discuss this issue call it an unexplored curriculum or a verbal curriculum. One of the important features of the hidden curriculum is that it does not refer to a specific plan; it is of situative character. Those who refer to it turn to unplanned technology in accordance with the requirements of the necessary point in any lesson, causing certain changes in the values, perceptions, and actions of the student. In other words, the emergence of risks during implementing of the interpreted curriculum leads to stagnation in the learning process. The hidden curriculum helps to provide situational assistance in coping with the situation. First of all, it requires flexibility and serious professionalism from the teacher.

Anvar Abbasov<sup>3</sup>, a prominent scientist in the field of research, study, and promotion of theoretical issues of educational curricula in Azerbaijan, classifies the types of curricula as follows:

**Written curriculum.** This is the curriculum adopted at the state and local curriculum management levels. This curriculum is basically intended to ensure the fulfilment of the system's learning objectives of the system related to any stage of education. At the same time, it can be characterized as a control curriculum. The written curriculum has more specific and detailed features, indicating the rationale that

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<sup>3</sup> See: Kurikulum bələdçisi. İzahlar və tətbiqlər. Bakı: Elm və təhsil, 2019, pp. 165-166

supports it, the specific goals that need to be mastered, the sequence of research on these goals and objectives, and the types of teaching activities to be used.

***Supported curriculum.*** A supported curriculum is one in which special funds and resources are created to deliver and support it. In the education systems of the developed countries of the world, these resources are grouped into four types:

- allotted time for a certain subject in each class;
- allotted time by class teachers to a particular aspect of the curriculum within one subject;
- appointment of teaching staff according to the number of students;
- textbooks and other teaching materials designed to use in the classroom.

The supported curriculum plays a central role among other types of curricula. First of all, in the developed curricula, pedagogues should pay special attention to the curriculum to be supported, taking into account the specific time allocation and teaching materials. Secondly, while implementing the curriculum, those in charge must ensure that appropriate support is provided for the implementation process.

***Delivered Curriculum.*** As the name suggests, this curriculum covers the process of delivering knowledge and skills to students. The delivered curriculum is not identical to the written curriculum. They are different from each other. In other words, the delivered curriculum arises as a continuation of the written curriculum. Although the written curriculum specifically covers goals, activities, and resources, it does not provide information about the materials on display, about the nature of the teaching process in the classroom.

Nevertheless, the curriculum allows the teacher to have individual skills and demonstrate them. In order to achieve practical goals, specific activities are organized within the conditions, using the life experience gained by the teacher. In addition to this, to meet the necessary needs in a more specific environment – in the classroom, teacher uses the knowledge that acquired from time to time in practice. The teacher mainly prepares the curriculum. Teachers also conduct assessments at the end of the process and evaluates students' activities

#### ***8.4. Structure of subject curricula***

The structure of subject curricula is as follows:

##### **I. The content of the subject**

- general learning outcomes;
- content lines;
- learning outcomes on content lines;
- types of activity;
- content standards;
- integration (intradisciplinary and interdisciplinary).

##### **II. Training strategies**

- description of the main requirements for the organization of training on the subject;
- recommendations on the improvement of forms and methods;
- examples on the planning of teacher's teaching activity;
- interpretation of content standards.

##### **III. Assessment of students' achievements**

- main types of assessment;
- assessment standards and assessment tools.

### **8.5. Content of subject curricula**

The importance of cognitive and constructive processes in the learning processes in our modern schools is emphasized. Maximum activity is required from the student in the learning process. The expected result from each learner is that he or she will be able to make sense of the new information based on their previous knowledge, cognitive and metacognitive activities. There are four categories of knowledge:

**1. Declarative (factual) knowledge.** Declarative knowledge includes scientific information related to any subject. Too much factual information is tiring for the student and makes it difficult to grasp knowledge. To make factual knowledge in structure, it is important to present information selectively. Declarative knowledge is divided into two categories: 1) terminological knowledge (covers terms related to the subject); 2) specific knowledge (including information about nature, society, and thinking).

**2. Conceptual knowledge.** Conceptual knowledge expresses category, classification, principle, generalization, theory, model, structure and, their relationship. Conceptual knowledge is the knowledge that answers the ‘what’ and ‘why’ questions.

**3. Procedural knowledge.** The knowledge that covers the rules of procedure for the performance of an activity is called procedural knowledge. Procedural knowledge is related to the question ‘how’. Procedural knowledge is divided into three categories: 1) subject-related skills and algorithms; 2) methods, techniques, and means related to the subject; 3) criteria for using appropriate procedures in its place.

**4. Metacognitive knowledge.** This knowledge involves awareness of cognitive processes. It involves both knowing cognitive processes and controlling and regulating them. It is

known that the more students know about the cognitive processes, the better they can learn. Metacognitive knowledge is divided into 3 categories: 1) strategic knowledge; 2) knowledge about cognitive tasks; 3) the knowledge that students have about themselves.

### **8.6. Features of subject curricula**

**1. Result-oriented nature of subject curricula.** The main aspects of this principle are pre-determining the results obtained in the teaching process and linking it to the content. Result-orientation is primarily based on learning activities allows to see the result that is the essence of the learning process as a whole. Learning outcomes in subject curricula are evaluated as *general and specific* outcomes.

**2. Student-oriented nature of subject curricula.** All the results reflected here aim at developing students' *cognitive, sensory and psychomotor* skills.

**3. Conceptuality of subject curricula.** The provisions here are conceptual in generalizing the system of activities on any subject in the country. Subject curricula cover the goals, objectives, content, technology and assessment for each subject and generalize a variety of work parameters coherently.

The content of results is included in the curriculum on the content lines and belongs to the education and grades stages. The boundaries of results for the grades are given at standard level and defined within the limits of standards and sub-standards.

**4. Integrative nature of subject curricula.** This is primarily because that it is prepared for secondary schools, enabling the formation of student personality, formation of life skills of students, and preparing them for sustainable activities. Therefore, the learning outcomes (learning standards) reflected in the curricula are given in such a sequence, in terms of complementing, strengthening, and

continuing each other, that it is possible to follow the formation and development of the student's personality.

**5. Preventive nature of subject curricula.** This is due to its conceptuality. Reflecting all learning outcomes, curricula allow assuming subsequent achievement. Conditions are created to determine the level of achievement obtained in the learning process. Sometimes it's shown that new curricula carry an explanatory character. Of course, such an approach weakens the new curricula's result-oriented nature and pre-emptive function.

**Check yourself.**

**1. Curriculum has been used as a term since ...**

- A) 1876.
- B) 1918.
- C) 1970
- D) 1990
- E) 2006

**A) B) C) D) E)**

**2. What are the reasons that made necessary curriculum reform in Azerbaijan?**

- A) requirements of the information society; integration into the world education system.
- B) emergence of new public relations in society; transition from a planned economy to a market economy.
- C) All are true.
- D) formation of new views and approaches to the goals and objectives of education;
- E) inconsistency of existing general education programs with modern requirements.

**A) B) C) D) E)**

**3. Match the types of curricula with their definition.**

1. *Formal curriculum.*

2. *Understandable curriculum.*

3. *Practical curriculum.*

4. *Empirical curriculum.*

a) This document is intended to reflect what happened in and around the classroom.

b) It is a curriculum designed for teachers, parents and others. It is sometimes called the 'curriculum of mental abilities.'

c) This curriculum document is formally approved by the state and local school councils and reflects the public interest.

d) This document focuses on the expression of the real experiences of learners.

**A) 1a; 2c; 3b; 4d B) 1c; 2b; 3a; 4d C) 1b; 2c; 3a; 4d**

**D) 1c; 2a; 3d; 4b E) 1a; 2b; 3d; 4c**

**4. Define the correct line of categories of knowledge.**

A) factual (declarative) knowledge; conceptual knowledge.

B) conceptual knowledge; procedural knowledge.

C) procedural knowledge; factual (declarative) knowledge.

D) metacognitive knowledge.

E) factual (declarative) knowledge; conceptual knowledge; procedural knowledge; metacognitive knowledge.

**A) B) C) D) E)**

**5. Complete the subject curricula with their appropriate features?**

1. *Result-oriented subject curricula ...*

2. *Student-oriented subject curricula ...*

3. *Conceptual subject curricula ...*

4. *Integrative subject curricula ...*

5. *Preventive subject curricula ...*

a) reflect all learning outcomes, allow to assume subsequent achievement, carry explanatory character. b) allow to see the end result that is the essence of the learning process as a whole.

c) enable the formation of student personality, formation of student personality, and prepare them for sustainable activities.

d) reflect all the results that are aimed at developing students' *cognitive, sensory* and *psychomotor* skills.

e) cover the goals, objectives, content, technology, and assessment for each subject and generalize various work parameters coherently.

A) 1a; 2c; 3b; 4d; 5e

B) 1e; 2b; 3a; 4d; 5c

C) 1a; 2b; 3c; 4d; 5e

D) 1b; 2d; 3e; 4c; 5a

E) 1a; 2e; 3d; 4c; 5b

### List of recommended literature

#### Chapter VIII

1. Westbrook J. et.al., Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. Final Report. University of Sussex, Center for International Development. December 2013, 151 p. <https://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=XHbLcIohFq0%3D>

2. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/Pedagogyand-Practice.html?id=qkW0uPu61egC>

3. Curriculum. <https://www.edglossary.org/curriculum/>

4. What Are the 8 Types of Curriculum? <https://www.m.edu/blog/8-types-of-curriculum>

5. General education concept (National Curriculum) in Azerbaijan Republic. [https://www.edu.gov.az/upload/file/milli\\_kurikulum-eng.pdf](https://www.edu.gov.az/upload/file/milli_kurikulum-eng.pdf)

## CHAPTER IX

### COGNITIVE AND PSYCHOLOGICAL BASES OF THE TRAINING PROCESS

#### *9.1. The essence of the training process*

The theory of teaching and education is the basis of pedagogy. This part of science is traditionally called 'Didactics'. The word didactics was first used in the works of the German pedagogue Wolfgang Rath (Ratichia) (1571-1635). J.A.Comenius and J.F.Herbart also explained didactics in different ways in their works. Comenius called didactics 'a universal skill that teaches everything to everyone', and Herbart gave didactics the status of a complete and unequivocal educative learning theory. The main tasks of didactics have not remained unchanged since the time of Rath. In addition to the problems of what and how to teach, modern theory and technology of teaching and learning also intensively studies the problems of when, where, who, how and why **to teach and bring up, develop and form**. Therefore, *didactics is a set of theories dedicated to researching specific problems of the pedagogical process, the theory, and technology of teaching and upbringing.*

According to the breadth of the being that the theory studies, it is divided into **general** and **special training and education theory and technology**. The general research field consists of instructional, educational, and upbringing activities and processes. Specialized research techniques, (specific) methodologies are called **teaching methodologies**. They study the content, forms, and methods of teaching

separate subjects. Each subject has its methodology.

The term 'training' refers to an event. 'Teaching process' and 'learning process' are associated with learning development in a certain time and place and indicate the sequence (system) of training.

In the writings of ancient and medieval thinkers, the notions of 'training' and 'educational process' are mainly understood as teaching. At the beginning of the twentieth century, the notion of 'training' included the two components that make up this process - **teaching** and **learning**. **Teaching** means the activity of teachers to organize the assimilation of teaching materials. **Learning** means the activity of students to master the material that is studied. The teacher's managerial activity on the formation of students' cognitive activity and the joint activity of teacher and students are also reflected in the concept of training.

Is it necessary to clarify the definitions of training at all times? According to modern requirements, the school must teach students to think and develop comprehensively. In pedagogy, the continuous improvement of notions is not a goal but a vital necessity.

The following typical features characterize training in the modern sense:

- 1) two-sided character;
- 2) joint activities of teachers and students;
- 3) guidance by a teacher;
- 4) to organize and manage the education and upbringing, development, and formation of students in a planned manner;
- 5) to be complete and united;
- 6) compliance with the objective laws of age development of students.

A brief definition of the theory of education and upbringing is: the theory and technology of training, education, and

upbringing is a relatively independent theory on the purpose of well-organized training, education and upbringing processes, regularities, principles, content, organizational forms, methods, tools and techniques of the educational process. The central notions of the theory and technology of education and upbringing are teaching, learning, education, upbringing, knowledge, skills, habits, and the purpose, content, types, forms of organization, methods, means, results of training. Recently, it is proposed to include the concepts of 'training system' and 'training technology' in the list of key concepts.

### ***9.2. Cognitive bases of the training process***

According to the theory of knowledge, the material world exists regardless of our consciousness. It is constantly evolving and changing. As a result of this development, the live matter is formed. At its highest stage of development, the human brain is formed along with a complex nervous system and sensory organs. The brain is the thinking matter, the organ of thought. The brain has the ability reflect the world beyond us objectively. The reflection of the objective world in our consciousness is perception. The training process is also based on this theory.

**1. Giving new knowledge.** The main stages of the training process reflect the structure of the learning process. The process of human cognition of the material world begins with live observation. Undoubtedly, the cognitive activity of students in training begins with this observation. In the broadest sense, observation is understood as the first acquaintance, sensation; that is a person comes into contact with objects and events in the world around him or her with

the help of all (or different) senses. The auditory, visual, olfactory, sensory organs, as well as other analyzers may be involved in this process. According to the information theory, this process is the process of obtaining information through various communication canals. The visual canal can send (receive) most of the information. The capacity of the auditory canal is much less than the visual one. Studies have shown that a person receives 90% of information about the world through the eyes, 9% through the auditory canal, and only 1% through other organs.

Emotions are the first and elementary form of cognition. According to the theory of cognition, the initial form of observation is emotions. Different qualities of objects (bright, dull, warm, cold, salty, sweet, etc.) are reflected in the process of feeling.

Separate information transmitted by various sensory organs is synthesized in the cortex of the brain's cerebral hemispheres, gets into contact with previous information that the person has, and forms the basis of perception. At this time, a person has a complete image of the object. As a result, images obtained through emotions and perception are kept in the memory in the form of imagination.

Imaginations can arise not only on the basis of direct observation but also on the basis of previous assumptions. *Imagination* plays a big role in describing the event in words. Emotion, perception, imagination are the components of cognition. They are the primary forms of cognition.

Physiologists explain *perception* as a reflector process. Irritant affects the receptor. In this case, the external energy, i.e., the effect, is converted into a nervous process. Nerve impulses enter the cerebral cortex. Here, the analyzers provide separation, understanding the event's separate properties.

It should also be noted that emotions are the result of the joint activity of the sensory organs and the cerebral cortex.

Observation in the process of cognition does not mean that the student has a passive perception of new material. The student's first acquaintance with new material is always effective: student listens, performs teacher's task, writes, draws pictures, answers teacher's questions, asks questions and so on. This time, the teacher's word is both a source of knowledge and a means of motivating students to a number of cognitive activities. However, the stage of sensory cognition provides only the perception of visible events. The essence of the events, the connection between them, the objective laws are not yet revealed at this stage.

**2. Understanding of the new knowledge.** Thinking can reveal the essence of events, provide a deeper, complete, and correct reflection of reality. Understanding the new is organically connected with the process of perception. Perception is always conscious. Understanding the information much depends on which canal it enters by. The first step in the understanding process for the student is to understand what the teacher says and shows, reads from the book and sees while watching an educational film.

In the process of assimilation, understanding plays a decisive role. Psychologists prove that what is well understood is very easy to learn and remember. Numerous repetitions are only needed to recall material which are poorly understood and poorly assimilated by the learners.

**Understanding** is based on connecting the new ideas with a previously acquired system of knowledge. It is always connected to personal experience. If the teacher mostly focuses students' attention on operations – analysis, synthesis, comparison, etc., understanding will be complete

and thoughtful. In this case, both the studied event and the reserve knowledge are analyzed. The goal is to find analogous, similar, or opposite signs.

In the process of comprehension, the process of reconstruction and systematization of the information obtained in accordance with the student's experience and knowledge intellectually occurs. This is the first step in the process of memorization.

Analysis, synthesis, and comparison allow making connections between the new material and the material that has already been learned. Analysis, synthesis, and comparison with their common and different aspects are related to comprehension, which is the first stage of understanding. They reveal more external similarities and differences, but not internal connections and relationships.

Only **abstraction** helps find common properties and characteristics and penetrate into the essence of things. However, abstraction and generalization are possible only on the basis of an initial analysis of all the components and features of the event, provided that a fully synthetic perception of the event may happen.

On the basis of the emergence and formation of notions stand the processes of abstraction and generalization. A notion reflects a generalized idea of the nature of an event or object. The general and important properties inherent in all events or objects underlie the notions. Notions are concrete, narrow and broad. The table is concrete, but it is a narrower notion than furniture, which is a broader notion. Any notion can be expressed through concrete objects. For example, if we say the word 'tree', everyone will think of their own life experience, a certain tree that is close to them.

The study of each subject is associated with the application and use of a number of notions. The content of

notions is revealed in definitions or descriptions with reference to other notions. Objective laws, principles, rules, generalizations are a system of relations between different notions. The logical form of these connections is judgments. Logically, judgment means making connections between different notions. For example, pedagogy is the science of education. Knowledge of pedagogy accelerates the acquisition of pedagogical mastery.

Another logical action that characterizes the work with notions is the intellectual outcome. If students make many grammatical mistakes in their writing, it means that they have not mastered that grammatical rule. There are different types of cognitive or intellectual outcomes. Induction and deduction are the basic ones among them.

**In the inductive mental outcome** the thought leads from special to a general idea, from separate observations to general theoretical conclusions (for example, copper, lead, zinc, and other metals conduct electricity, so it is possible to draw general conclusions about the electrical conductivity of metals).

Moreover, **in the deductive mental conclusion**, on the contrary, the idea goes from the general theoretical conclusion to the specific one. For example, 'All metals conduct electricity'. So copper also conducts electricity.

Notions, judgements, and mental conclusions are the main forms of abstract thinking. Information obtained through our senses about objects and events is only relevant and important, when it is understood and expressed in words.

**3. Application of knowledge in practice.** In the theory of cognition, the reliability of theoretical knowledge is tested in practice. The basis for verifying the accuracy of knowledge is to apply generalized notions, laws, and

provisions in specific situations.

This stage of cognitive activity is a higher stage, the stage of transition from abstract to concrete. This stage is characterized by applying abstract theoretical knowledge to the solution of specific problems of reality. In the theory of knowledge, practice acts as the criterion of truth. There is no abstract truth, and the truth is always concrete.

Transition from abstract to concrete provides a solution to three tasks in learning and cognitive activity:

- 1) strengthening of knowledge and their memorization;
- 2) formation of specific skills and habits on the basis of knowledge;
- 3) application of knowledge to solve problems of daily life.

In the real teaching process, transition from abstract thinking to practice is achieved by performing several of specific operations, tasks, and activities. These operations require restoring the cause-and-effect dependencies in memory and comparing the new with the already known concrete.

This is followed by the process of consolidating knowledge and developing relevant skills and habits with the help of a system of various exercises and tasks.

**4. Control over the acquisition of knowledge.** In the process of scientific cognition, the scientist regularly monitors his or her actions, activities and results. In the teaching process, the teacher monitors students' cognitive activity progress, which is, above all, current control. Current control or supervision helps the teacher determine how well the teaching material is assimilated. Final control (thematic, subject control, exams, etc.) is also of great importance.

Knowing the main links of the training process, its

psychological basis allows the teacher to organize the process more efficiently and effectively.

### ***9.3. Psychological bases of the training process***

The process of cognition is a reflection of the events in the mind of human being and things that surround us, and it goes from a living observation to abstract thinking and from there to practice. This is the dialectical way of perceiving objective reality. Cognitive theory is the scientific basis of the training process. As a process of scientific cognition, the process of training is about overcoming contradictions. The main contradiction among these is the contradiction between society's needs and possibilities of the existing forms and methods of the training process. It's worth denoting that many pedagogue-scientists are engaged in resolving this contradiction. First of all, the psycho-physiological issues of perception of information and its transformation into knowledge, skills, and habits are studied.

Some sources give a broader structure of the training process. The stage of psychological preparation for the perception of information plays an important role here. This structure is as follows:

- 1) psychological preparation for the perception of information;
- 2) perception and understanding of information;
- 3) generalization of information and its transformation into knowledge;
- 4) reinforcement of knowledge;
- 5) application of knowledge, skills, and habits;
- 6) analysis of students' work (to control the acquisition of knowledge, skills, and habits).

Naturally, all the structural components of the training process are inseparable and interdependent. When all their opportunities of training are fully used it gives good results.

**1. Psychological preparation for the comprehension of information** consists of the student's clear and unambiguous understanding of the purpose of the subject to be studied. It is obligatory to study at school. The teacher's task is to raise students' interest in reading, to prepare them psychologically to understand the subject.

The student must have a clear idea of where he is going. If the goal is not clear to the student, the efficiency of the perception of information will be little or there'll be no effect. Therefore, the teacher should pay enough attention to bringing the goal to students' attention.

Textbook, teacher's narration, explanation and lectures are sources of knowledge for students. If the student is psychologically ready to comprehend the material, the information from the textbook, he or she can learn it just then. If the student's reaction to the textbook is negative or neutral, the information will not be mastered. So, the level of perception to a large extent depends on the psychological preparation of the student.

**2. Perception and understanding of information.** Perception reflects the interrelationship of objects and their properties in the human mind. It is caused by the direct influence of objects on the organs of the human senses. As in scientific cognition, the first stage of perception in learning begins with the senses. When teachers talk about the properties and qualities of objects and events, they are reflected in students' mind through vision, hearing and other sensory organs. In addition to physical objects, the perception of objective reality includes the ideas expressed by the teacher.

As with any cognitive process, perception depends on students' knowledge, experience, interest, etc. The experience of students, the level of theoretical and practical preparation on the subject play an essential role in the perception of the educational material.

Didactic rules **from known to unknown, from simple to complex are important for perception.** The completeness and accuracy of perception depend on it. Observation is the basis of our knowledge. However, as a result, using only observation, perception won't be complete and profound. Only the connection between observation and abstract thinking can leave a strong mark on a student's mind. Perception is complete when students are actively involved in the process of perception. Active perception is a thoughtful perception. In the process of thinking, involuntary memory is formed. The well-known pedagogue K.D.Ushinsky said that when a teacher both speaks and demonstrates, and even teaches the properties of the object of study by touching, a deep imprint is left in the student's mind. Therefore, visual aids—posters, models, diagrams, movies and modern technologies enhance the impression.

Each of the human sensory organs can perceive the different volume of information at the same time. The human eye can distinguish up to 400,000 points. It should be noted that the perception and permeability of the visual canal are 20 times greater than the perception and permeability of the auditory canal. It is necessary to take into account this psycho-physiological feature of a person. That is why the teacher should build his or her explanation, narration, and lectures on illustrative material to attract the class's attention and ensure a complete understanding of the material being taught.

The information given through the auditory canal can be understood only after listening to it in a logical sequence until the end. It takes more time with the auditory canal, and less time with the visual canal to deliver the same volume of information. This aspect should be taken into account when building the pedagogical process. However, more oral information are given in the training process. This is due to the fact that a lot of time and means of material are spent on the preparation of visual aids. The auditory canal is faster than the visual canal to transmit information. This situation sometimes leads to the idea that the auditory canal is more efficient than the visual canal. However, as can be seen, the permeability of the auditory canal is lower than the permeability of the visual canal. In order to fully use the potential of the canals of perception, it is necessary to try to increase the value of information. Visual aids should not contain items that are not necessary for the lesson. All visual aids should be presented to students only when the teacher explains the lesson. Unfortunately, some experienced teachers forget this, bring illustrative material in advance and hang it in the classroom.

The value of the information received through the auditory canal decreases due to the poor speech of the teacher. Therefore, the same words should not be used too often in speech. They reduce the effectiveness of speech, make it uninteresting (for example, let's say, so, in a word, etc.). The teacher's mastery is that he or she should use the capabilities of both visual and auditory canals correctly, and the information coming through these canals should complement each other. However, humans also perceive information with the help of sense of smell, sense of touch, sense of taste and other analyzers.

Due to the brain's limited capacity, a certain volume of

information is lost. The volume of information is lost when the teacher's comment, narration, or lecture is fast and slow. When the comment is fast, the students do not have time to think, and when the speed is slow, they become dreamy and inattentive. In this case, the factor of obstacles becomes stronger. To enhance the depth of perception, experienced teachers use emotional ways, change intonation, and pause. Here the teacher's gestures and facial expressions play a big role. These gestures and facial expressions accompany teacher's words, helping draw students' attention to the comment's content. In other words, teacher's thoughtful gestures and facial expressions affect the visual canal of students, direct their attention to the content of the information received through the auditory canal, and help the information to leave a deep mark on the mind. If the lecture is not emotional, the students get tired quickly, and as a result, the depth of perception decreases. In this case, the influence of barriers increases. The teacher's walking in the classroom also distracts the class and weakens the perception. In addition, the teacher's frequent use of the same words and gestures can severely impair class attention.

**3. Generalization of information and transformation into knowledge.** In order to transform the perceived information into knowledge more effectively, the students must compare that information with the facts, notions, definitions known to them, summarize and systematize the knowledge in their mind. Mechanical assimilation of information, memorization of formulas and definitions without consciousness lead to the formal assimilation of knowledge. On the other hand, formal assimilation does not contribute to the mental development of man and leads to dogmatism, but not to creativity. Today, psychologists and

pedagogues have identified four levels of knowledge covering all types of activities of students:

- 1) level of acquaintance;
- 2) level of knowledge;
- 3) level of skills;
- 4) level of habits.

Of course, it is not only the level of acquaintance required in secondary schools. It is clear that this or that subject must be studied at a certain level. For example, in order to study geometry, it is not enough to know only the theorems, but also to have the ability to prove that theorem, and so on. Thus, natural sciences and mathematics and language classes should be studied at the level of knowledge and skills, literature, history, social science, geography only at the level of knowledge, and labor training at the level of knowledge, skills and habits.

**4. Strengthening the knowledge.** Human memory has excellent potential in the transformation of information into skills and habits. However, the human brain can quickly lose specific information. The task of training is to ensure keeping the received information in human memory for a long time.

Many factors affect the degree of memorization of information. They include individual characteristics of the student, the degree of perception of the importance of the material studied, the level of perception of the given information, the initial depth of perception, the teacher's emotional reactions, the level of the factor of obstacles, the strength of new impressions.

It is known that the weaker the depth of perception is, the greater the obstacles in the process of consolidating information are. Small volumes of information are poorly remembered, and large volumes of information are remembered better. Psychologists explain it this way, because

students do not make a voluntary effort to memorize small volumes of information. Therefore, memorizing such information requires more attention and voluntary effort from the student. If the volume of information is too large, the memory will be overloaded, distraction and fatigue will begin, which will weaken the depth of perception. Information that does not cause interest to the student is quickly forgotten. Experimental data show that logically related information is well understood and remembered for a long time.

If there is a strong deviation after the perception of information, it intensifies forgetting. The main reason for forgetting it, is that new information has a stronger impact. If the same information is repeated many times, it will be forgotten too late. This means that new information is forgotten faster than repeated old information.

Repetition of training material is significant in school. However, repetition should not consist of mere learning. The student must be able to use the acquired knowledge in solving practical problems. Repetition is effective only if the student is able to control the results of his work. Otherwise, the student will lose confidence in his or her knowledge. An example of this is checking the correctness of the solution of the task. If the student can check the homework solution with its answer, he will feel more confident.

Consciously assimilated information becomes sound knowledge. This knowledge becomes a tool for students to think and act. Skills can also become habits.

**5. Applying knowledge, skills and habits** is a crucial stage in the learning process in training. It is not enough to perceive, comprehend and strengthen knowledge. Perceiving, understanding, and remembering information does not mean

learning to apply what has already been studied. The main goal is to apply the acquired knowledge to solve practical problems. There are cases when a student correctly narrates what he has heard from a teacher or read from a textbook but is unable to express the material in his or her own words. If the questions are asked in a slightly different form, he will not be able to answer the questions on the topic, and will have difficulty with solving the problem or doing sums. However, the student can express how to solve a problem. Thus, the perception took place mechanically, without deep thinking, without the presence of consciousness, that is, there was no active element of perception.

One of the important elements of the educational process is the solution of problems and doing sums, analysis of sentences, laboratory and practical exercises. In this work, theoretical knowledge is transformed into skills and habits. At this stage, the transformation of knowledge takes place (*application of knowledge in one area to solve a problem in another area*).

**6. Analysis of students' work (monitoring the acquisition of knowledge, skills and habits)** is the final stage of the training process. This is the opposite process and feedback, that is, information is transmitted from students to teachers. Feedback allows the teacher to analyze the quality of students' mastery of the educational material. The higher the quality of feedback is, the more successfully the training process is managed. On the bases of the information received, the teacher influences the students, gives advice or has the necessary moral impact. If necessary, the teacher forces lazy students to work harder and gives them specific tasks. Thus, the teacher manages the students' work and achieves good results in training.

Training and upbringing are two integral parts of a single

process. Teachers' upbringing work plays an important role in the effectiveness of the educational process. If students do not like a definite subject, it is the result of teacher's poor psychological preparation of students, improper educational and methodological work, formal and non-innovative approach to their subject, and the teacher's failure. However, upbringing is not just about making students love different subjects and teaching them. Training and upbringing cover a wide range of complex issues.

**Check yourself.**

**1. Characteristic features of training are:**

- A) two-sided character; joint activities of teachers and students;
- B) guidance by a teacher; to be complete and united;
- C) to organize and manage the education and upbringing, development and formation of students in a planned manner;
- D) compliance with the objective laws of age development of students;
- E) all are true.

**A) B) C) D) E)**

**2. A person receives ... % of all information about the world through ... .**

- 1. The eyes
  - 2. The auditory organs
  - 3. Other sensory organs
- a) only 1%
  - b) 90%
  - c) 9%

**A) 1b; 2a; 3c    B) 1c; 2b; 3a    C) 1b; 2c; 3a**  
**D) 1c; 2a; 3b    E) 1a; 2b; 3c**

**3. Transition from abstract to concrete provides a solution to ... tasks in learning and cognitive activity:**

- A) one task - strengthening of knowledge and their memorization;
- B) two tasks - formation of specific skills and habits on the basis of knowledge;
- C) it provides no task;
- D) three tasks - strengthening of knowledge and their memorization; formation of certain skills and habits on the basis of knowledge; application of knowledge to solve problems of daily life;
- E) all versions are true.

**A) B) C) D) E)**

**4. Define the correct order of the structure of the training process.**

- 1) perception and understanding of information;
- 2) psychological preparation for perception of information;
- 3) generalization of information and its transformation into knowledge;
- 4) application of knowledge, skills and habits;
- 5) reinforcement of knowledge;
- 6) analysis of students' work (to control the acquisition of knowledge, skills and habits).

**A) 6; 1; 2; 3; 4; 5.**

**B) 2; 1; 3; 5; 4; 6.**

**C) 5; 3; 4; 6; 2; 1.**

**D) 4; 2; 3; 1; 5; 6.**

**E) 3; 4; 5; 6; 2; 1**

**List of recommended literature**  
**Chapter IX**

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3. Cognitive Skills Are the Foundation for Learning. <https://mybrainware.com/cognitive-skills/cognitive-skills-foundation-for-learning/>
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## CHAPTER X

### TAXONOMIES<sup>4</sup>

#### *10.1. What is taxonomy?*

**Taxonomy** is the practice and science of categorization or classification – a scheme of taxonomical classification, especially a hierarchical classification. Taxonomy means the study of taxa, their grouping and subordination, the science or the principles of classification. The word is of Greek origin i.e., τάξις, *taxis* means ‘order’, ‘arrangement’ ‘placement by rule’, and νόμος, *nomos* is ‘law’ or ‘science’. The members of the taxonomic classification are called taxon. **Taxonomy** or **taxonomic categories** are a system of notions that reflect the development of a chain, hierarchy from simple to complex. The hierarchy of taxonomic categories was first created by Carl Linnaeus, a member of the Swedish Royal Academy of Sciences, one of its founders, a member of the Paris Academy of Sciences, and many other scientific societies and academies. It was first used as a term in 1813 by Augustine Deccandol to classify plants. Later, the term was widely used in biology and pedagogy, linguistics, geography, geology, and other fields of science to show the essence and classification of the complex systems. Mathematically, a taxonomy is a set of systematized objects with a tree structure. At the very top of this structure, there is the single unifying taxon – foundation taxon. Lower-level taxa are more specific taxonomic units than the upper ones. Only three of

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<sup>4</sup> *This chapter was written by doctors of philosophy in pedagogy, associate professors Anvar Abbasov and Kamala Guliyeva.*

the various taxonomies – cognitive, emotional, and psychomotor taxonomies have been considered important by education experts. The following definitions of taxonomy are given in pedagogy and psychology:

A taxonomy is called a networked (hierarchical) or ‘systematic’ classification of learning objectives. (Abdul Alizadeh)

The systematic theory of complex fields of activity with the arrangement of networks is called taxonomy.

**“Why do we need taxonomies in education?”** As a result of the analysis of research work relating to the problem, the question can be answered as follows:

***To set the right goals in education.***

***For students to formulate tasks correctly.***

***To select adequate assessment tools.***

***To conduct a proper analysis based on the training outcomes.***

The taxonomy of teaching objectives has been studied by various scientists as an object of research since the 1930s, and conceptual models reflecting the structure of cognitive processes and intellect have been created. Taxonomies in cognitive, emotional, psychomotor (cognitive, affective, involuntary) fields were developed by R.V.Tyler (1930), B.Bloom (1956), J.Guilford (1967), Wilson (1967), Bruner (1979), and others. Other researchers have explored these issues in the context of taxonomies.

### ***10.2. Principles of creating taxonomies***

The American scientist B.Bloom also conducted research on the principles on which it will be based at the initial stage of developing taxonomies for teaching purposes. At this time,

he realized that the work he was going to do was extremely severe and responsible and was of great importance theoretically and practically. In addition to this, he paid special attention to taking into account the cognitive characteristics of children. Finally, he reached the following conclusions regarding the principles necessary for the preparation of taxonomies:

1. Taking into account the practical direction.
2. Consideration of psychological features.
3. Logicality.
4. Objectivity.

The principle of taking into account the practical direction. Taxonomy should reflect the theory of expediency and be an effective tool for teachers and those who use it. Psychological principle: taxonomy should be based on modern achievements of psychological science. Principle of logicality: taxonomy must be logically complete and have perfect internal maturity. Principle of objectivity: the classification of goals does not mean classifying their values, but it is an indicator of the reality of mastery. Bloom's taxonomy is the universal model in the world education system. These taxonomies provide six levels of thinking skills from simple to complex. Considering these principles, six levels of learning objectives in the field of cognition, such as knowledge, understanding, application, analysis, synthesis, assessment, were identified.

Research in Azerbaijan on the development of curricula has shown that these principles should be reconsidered and creatively used in the development of educational standards in accordance with the conditions of Azerbaijan.

Identification of new stages of development (**learning + development + culture**) in the field of cognitive, sensory and psychomotor activities of personality makes it necessary to

build taxonomies in Azerbaijan on the basis of the following principles:

1. Practical importance
2. Theoretical importance
3. Logicality
4. Objectivity

**1. Practical importance.** Although taxonomies require that goals be considered in general and shared with others, they do not prevent it from being a useful tool in practice. On the contrary, they are referred to in the development of educational standards. In addition, they are used to establish teaching principles and conduct training activities. Finally, teachers should refer to taxa whenever possible to determine learning objectives when developing specific curricula. These clearly show the practical importance of taxonomies.

**2. Theoretical importance.** Taxonomies are interrelated and manifest on a psychological, pedagogical, philosophical bases. In general, their scientific and theoretical significance emerge and play a role in the formation of learning theory in pedagogical psychology.

**3. Logicality.** Learning objectives exist with connections on a specific network and are followed by dynamic movements. They are connected by taxa, which represent the development of the student's personality and are arranged on the principle from simple to complex. In the network classification of learning objectives, the parameters of the student's personality are visible.

**4. Objectivity.** We usually have to classify taxonomies. We group them separately. This grouping should not create the impression that one of the learning objectives is more important than the other, that what comes first is more important, and what comes next is less important. All this is

necessary for Azerbaijani education but is given in the form of classification according to development dynamics. These principles determine the integrity of taxonomies as they are interrelated. Standardization of education continues in Azerbaijan. The development of educational standards inevitably highlights the need for taxonomies to be more comprehensive and perfect.

### ***10.3. Cognitive taxonomies.***

Over the years, taxonomies have been created not only in the cognitive, but also in the emotional and psychomotor areas. Let's get acquainted with them. In psychology and pedagogy, the repercussions of B.Bloom's taxonomy are great. The 50s and 70s occupy an important place in the history of pedagogical psychology as a special stage in the development of taxonomies.

***Cognitive goals.*** These goals are associated with acquiring knowledge and the development of mental abilities. They involve mental operations or thinking skills and are called cognitive taxonomies. B.Bloom, M.Enleghart, E.Furst and D. Krathwohl (1956), J.Gilford (1967), McPur (1969), D.Hynot (1977), Gronland (1970), Bandelverd (1975), A.Alizadeh (1998) (2007) and others are the creators of cognitive taxonomies. In addition to these, there are R.Marzano's 'Thinking Skills', Costa and Calica's '16 Ways of Thinking' and other taxonomies.

#### ***B. Bloom's taxonomy.***

In 1956, under the guidance of American psychologist Benjamin Bloom psychologists Max Englehart, Edward Furst, Walter Hill and David Krathwohl developed methods to classify cognitive abilities and created a network of intellectual skills that are essential for all levels of thinking in

the educational process. The taxonomy, called the Taxonomy of Cognitive Goals covers different levels of thinking or reasoning skills and is used in planning the teaching process. Bloom's taxonomy is used as the universal model. These taxonomies provide the organization of six levels of thinking skills from simple to complex. The initial version of B. Bloom's cognitive taxonomy is presented in table № 1. Considering this principle, six levels of learning objectives in the field of cognition have been identified: knowledge, understanding or (comprehension), application, analysis, synthesis, and assessment.

**The level of knowledge.** This level implies learning objectives aimed at memorizing, recognizing, recalling the basic elements of learning information on the subject area. Also, it includes knowledge of terminology, basic facts and elements, classifications, criteria, principles and generalizations, theories, models, structures. Students' knowledge can be tested by giving tasks using the following verbs: *define, name, recognize, diagnose, describe, place, select, separate facts from criteria, make a list, identify, find the appropriate one.*

In Bloom's taxonomy, special attention is paid to the taxonomic analysis of understanding, application, analysis, synthesis and evaluation levels. His commentary focuses on the psychological portrait of the respective levels.

**The level of understanding** interprets (comments), explains, extrapolates or applies notions (events) related to a certain field (or to another field), is able to understand the material, shapes it, expresses it in another way, clarifies or predicts activities.

The following verbs can be used to test students' understanding by giving them tasks: *show examples, illustra-*

*te, construct, copy, translate, describe in other words, express, explain, and so on.*

**The level of application** implies the formation of students' ability to apply knowledge in practical situations. The teacher can use the following verbs to test students' ability to use the information and apply knowledge in new contexts: *demonstrate, illustrate, classify, calculate, and etc.*

**The level of analysis** is understood as the ability to analyze (to distinguish, study, break down the perceived object into its various components, to distinguish this or that aspect of the object, its elements, properties, connections, relationships, etc.). The following verbs can be used to analyze and test students by giving them tasks: *differentiate, derivate (formula), describe schematically, compare, match, etc.*

**The level of synthesis** is the goal of education, which forms the ability to determine the relationship between the separate elements produced in the analysis process and to draw general conclusions from them. This level systematizes abstract the ideas, combines the separated components through complete analysis, creates an original idea. The following verbs can be used to test students' ability to synthesize by giving assignments: *hypothesize, make out a list, set up, plan, restructure, compile, organize, and so on.*

**Evaluation level** involves the development of diagnostic skills, critical thinking. It judges ideas, information, makes important decisions, expresses attitudes. The following verbs can be used to test students' ability to evaluate by giving assignments: *to choose the most important, to criticize, to defend, to discuss, to justify, to conclude, to determine the location, etc..*

**Table 1.**

<b>B. Bloom's Taxonomy</b>			
<b>Level</b>	<b>General learning outcomes</b>	<b>Specific learning outcomes</b>	<b>Indicators of activity</b>
<b>Knowledge</b>	Knows general terms.	Determines, describes, enumerates, ranks, selects	To keep in mind, to remember, to recognize, to point.
<b>Perception</b>	Understands facts and principles.	Distinguishes, explains, shows examples.	To explain, to describe in one's own words, to change.
<b>Application</b>	Applies notions and principles in new contexts.	Changes, calculates, uses, demonstrates.	To solve the problem, to apply the information to get results.
<b>Analysis</b>	Analyzes the organizational structure of the work.	Separates, divides into parts, connects, identifies.	To define the components that make up a whole, their structure and properties.
<b>Synthesis</b>	Creates schemes by classifying objects and ideas.	Creates, compiles, writes, speaks.	To create a unique original product that can be both an oral and a physical object.
<b>Evaluation</b>	Evaluates the logical sequence of written material.	Compares, confronts, judges.	To make important decisions on the issue; to resolve disputes or disagreements.

***Other most well-known cognitive taxonomies are:***

**B.Bloom:** Knowledge, Understanding, Application, Analysis, Synthesis, Evaluation (assessment).

**J. Guilford:** Recognition, Keeping in memory, Convergent Use, Divergent Use, Evaluation.

**V. Simonov:** Separation, Keeping in memory, Understanding, Simple skills and habits.

**V.Bespalko:** Recognition, Application, Planning, Creative Approach.

**V.Maksimova:** Recognition, Keeping in memory, Understanding, Application.

**M.Skatkin:** Expression of concept, Knowledge of concept, Application of concept, Expression of the system of concepts, Application of the system of concepts.

**M.Lebedev:** Knowledge, Functional literacy, Literacy, Knowledge-skills-habits.

**V.Teslenko:** Knowledge, Repetition, foundation, deepening, creative approach.

**A.Alizadeh:** Learning, Development, Culture.

**V.Korolyova:** Reproductive independent recovery; Reproductive algorithmic activity; Productive heuristic activity; Productive creative activity.

Apparently, in the taxonomies of these researchers the development of the cognitive sphere is set as a goal. Among them, only in the triplet taxonomy of A.Alizadeh and the cognitive sphere, the cultural taxon was used, which envisages the formation of the student as a personality.

One of the original concepts that draw attention to the learning objectives, which are important from a theoretical and practical point of view, is the taxonomy of American educators V. Hellah and A. Sullivan. If B.Bloom's classification of learning objectives was based on the cognitive skills, Hellah-Sullivan taxonomy is based on the

concept of learning activities, i.e., the procedures that students perform in learning activities. In the taxonomy of learning objectives they offer the following levels:

**Identification:** to recognize and identify, and relate a particular element to a given class or department.

**Naming:** to repeat names, ideas, notions, concepts, procedures, methods in written or oral literary language.

**Describing:** to interpret events, processes, and stories in written or oral terms.

**Organizing, creating:** to arrange an object and event according to the required features.

**Regulating:** to perform the work in a certain sequence, to classify and systematize training information.

Marzano also has a taxonomy of 'Thinking skills'. This taxonomy is distinguished by its peculiarities.

In this taxonomy, the cognitive goal included in the content sphere covers eight main categories of thinking skills:

- **concentration;**
- **collecting information;**
- **keeping in memory;**
- **systematizing;**
- **analysis;**
- **generalization;**
- **integration;**
- **evaluation;**

Moreover, at the level of creative and logical thinking, it involves the formation of eight thinking processes:

- **formation of concepts;**
- **formation of principles;**
- **understanding;**
- **problem solving;**

- **decision making;**
- **research work;**
- **conclusion;**
- **oral (verbal) discussion.**

Unlike Bloom's taxonomy, none of Marzano's categories of thinking skills is aligned with the other. Each cognitive category is important in itself. Unlike B.Bloom, who systematized levels of cognition, and Marzano, who explored the category of intellectual abilities in the context of the social and personal spheres, Costa and Calica have identified sixteen conditions for overcoming difficult situations. Strategic thinking, depth and sharpness of mind, and persistence occupy a special place among these conditions. All these taxonomies mainly reflect certain elements of cognitive and development taxa.

In the fundamental cognitive taxonomies associated with B.Bloom's name, thinking skills are classified from simple to complex according to stages. This taxonomy is fundamental because it forms the basis of subsequent, more complex cognitive skills (problem solving, judgment, proof, coordination). Cognitive skills are systematically developed in the formulation of the activity (skill) component of the content standards of the subject. All stages of cognitive taxonomies must be reflected in the standards for each class. However, these stages should be developed from class to class, from simple to complex, taking into account the age of students in each class.

#### ***10.4. Affective-emotional (communicative) taxonomies.***

One of the key objectives of the curriculum is to develop the values in students. Emotional taxonomies play a significant role in solving these problems. Emotional

taxonomies are of great importance in organizing the development of students' feelings, attitudes, values and emotions. These taxonomies are also expressed in some literature as affective taxonomies. D.R. Krathwohl, B.S. Bloom and B.B Masia (1964), L.O. Wilson (1967), Gronland (1970) and others are considered the creators of emotional taxonomy. In 1964, D.Krathwohl and B. Masia created a classification system of emotional taxonomy. Five stages of this taxonomy have been identified. These stages have been explored for the development of standards, and it is believed that expressing emotional taxonomies in standards is more complex process than other taxonomies. Because the terminology used in this field is abstract as it deals with feelings and emotions. While some standards make it possible to describe emotional abilities clearly, many are hidden and can only be intended. Emotional taxonomies integrate with other taxonomies because they evolve, and values are determined on the basis of behavior.

**Acceptable consideration.** The student is stimulated to participate in any learning process. The outcome of this training is selected and developed without understanding the existence of the object.

**Giving reaction.** The student actively participates in the learning process, answers questions, reacts to events. As a result of this training, the search for the student's tastes and interests and their application in the activity is emphasized.

**Evaluation.** The student serves to evaluate any event. This training allows for the general classification of any 'approaches' or 'sympathies'.

**Organization.** In general, it refers to the creation of a system of values. Learning objectives that serve to create a student's philosophy of life are based on this category.

**Values and mastering the system of values.** At this stage, the individuals have a system of values that determines their behavior and lifestyle. These learning outcomes help to shape the student's personal social and emotional behavior. This taxonomy expresses a network of emotional goals. These goals are related to the formation of values and students' emotional development.

### ***10.5. Taxonomies of the psychomotor field***

Among the taxonomies created in the history of pedagogical psychology from the 50s and 70s of the XX century, taxonomies in the psychomotor field have a special place. Simpson (1966), Daves (1969), Beldwin (1971), Bruner (1973), and others are considered the first researchers in this field. In some scientific literature, the term **psychomotor** is used as **involuntary**. *Motor goals* are related to the development of motor skills and physical endurance. There are several taxonomies in the psychomotor field: A. Harppor's taxonomy, E. Simpson's taxonomy, Ken Thomas's taxonomy, K. Moore's systematized psychomotor taxonomy, etc. K. Moore divides psychomotor taxonomies into three stages: ***imitation***, ***management (manipulation)*** and ***exact execution***. In the imitation (simulation) phase, students imitate what the teacher demonstrates, and he or she demonstrates the initial level of motor skills. At the management stage, the student is expected to be able to demonstrate any motor skills independently, without the help of a teacher. Although the student needs to be free to perform the actions at this stage, inaccuracies in implementation are acceptable. Accurate performance is the highest level of

psychomotor skills. At this stage, students perform actions skillfully and accurately. They automatically control other activity elements while demonstrating any skill without thinking. The levels of this taxonomy are as follows:

**Feeling** - *Determines capabilities before performing actions.*

**Preparation** - *Prepares for the fulfillment of actions.*

**Imitation** - *Repeats the demonstrated actions.*

**Mastering the mechanism** - *Performs actions in accordance with the rules.*

**Perfect performance** - *Demonstrates well-formed activities.*

**Adaptation** - *Makes a change in behavior to solve a problem that arose during the fulfillment of an action.*

**Creativity** - *Creates new patterns of activity.*

In 1972, Anita Harppor created a six-level taxonomy for children with special physical needs and abilities. These levels are as follows: reflective movements, basic fundamental actions, perceptive, physical exercises, experienced, skilled actions, logical connections. In 1969, Elizabeth Simson also identified six levels of psychomotor taxonomy: perception, preparation, mechanism, automation of complex movements, and improvement of motor activity. These skills include muscle development and physical activity. The most emphasized subjects in psychomotor skills are physical teaching technology and music. Other subjects are more or less related to voluntary or involuntary psychomotor skills.

### ***10.6. Triple (three-component) taxonomies of Abdul Alizadeh***

Training objectives, reflecting the criteria of pedagogical thinking of that time, occupy one of the important places in the creative work of Abdul Alizadeh as an object of research. Evaluating the interpretation of the meaning of teaching in the unity of three fundamental criteria - education, development and upbringing as a success of new pedagogical thinking, and referring to the pedagogical psychology of foreign countries, A. Alizadeh uses the term 'taxonomy' for the first time since 1996 in the pedagogical psychology of Azerbaijan to systematically characterize the learning objectives. Until then, learning objectives have been traditionally characterized and analyzed. The triple categories of educational, developmental and upbringing teaching goals were once purely understood as educational goals. Later, educative and developmental teaching goals were formed on the basis of the educative and developmental principles. 'The teaching goals of education, development and upbringing are inseparable, as they say, like meat and nails. The teacher implements them not in isolation, but in unity', said Alizadeh, who for the first time, created a triple, i.e., three-component taxonomy based on the principles of modern education theory. 'According to the modern theory of education, the principle of personality-oriented teaching is carried out in three ways: 1) didactic purposes of the lesson; 2) upbringing purposes of the lesson; 3) developmental purposes of the lesson'.

The results of the last ten years of prof. A. Alizadeh's creativity work consists of the system of 'Three-component taxonomies'. This system is the scientific-psychological basis of the document 'The Concept of general education (National

Curriculum) in the Republic of Azerbaijan'. This taxonomy consists of three sections. The main taxonomic categories are classified according to the **educational** purposes in the first section, **developmental** purposes in the second section, and **upbringing** purposes in the third section. The first section consists of two blocks: a) knowledge (information); b) a system of skills and habits. The first block is based on the main categories of B. Bloom's taxonomy with some modifications. A. Alizadeh writes that teachers often determine the educational purpose of a lesson in a general way: 'The teacher, who formulates the lesson in such general words as 'teaching the subject' and 'mastering the concepts', builds the lesson within the framework of this 'logic', or rather, the logic of living. Whereas the educational goals of the lesson are multilateral and should be used effectively to provide students with detailed knowledge. In the first block, the author shows the epistemological key to it: 'In order to form students theoretical thinking, it is necessary to study educational material in different directions'. The second block of the first section provides the systematic training of skills and habits.

The second section outlines the developmental objectives of the lesson. In this section, as A. Alizadeh noted, some categories of B. Bloom's taxonomy were used, but explained in modern terms. According to the research results in the field of the structure and development of intelligence (G. Gildford, J. Piaget, L.S. Rubintstein, V.V. Davidov, etc.), in the second section, a special attention is paid to the development of thinking, imagination and memory. In A. Alizadeh's taxonomy, analysis and composition are evaluated as 'common denominators' of cognitive activity, on the basis of which all intellectual processes (comparison, generalization,

classification, etc.) and the formation of teaching operations and intellectual skills are considered. In the third section, the upbringing goals of training, which include all the dimensions related to personality formation, are classified. This is the initial version of the three-component taxonomy. This taxonomy has been improved by the author. A taxonomy consisting of taxa of learning, development, and culture has been created.

*The system of components of a three-component taxonomy (learning, development, culture).*

**Learning** – knowledge, skills, habits, remembering, comprehension, application, evaluation.

**Development** – analysis, synthesis, comparison, generalization, abstraction, qualities of mind, cognitive and creative processes.

**Culture** – a culture of feelings, communication, moral culture, volitional culture, national-spiritual culture, secular culture.

The difference between the first and last versions of the three-component taxonomy is that *education* and *upbringing* are presented as the main notions in the first variant of the Azerbaijani taxonomy. In the second version of the taxonomy, the issues of education are opened by learning, but *cultural* paradigms reveal the issue of upbringing.

A. Alizadeh noted that learning objectives are characterized by general dimensions in his taxonomy. The taxonomy under consideration should be specified for separate subjects and classes. Specific features of the subjects of literature and physics should be identified and explained in terms of age characteristics.

### 10.7. From taxonomies to lessons

The role of taxonomies in developing the student's personality is significant. As Bloom himself noted, cognitive taxonomy leads to the development of learners' thinking, comprehension (understanding) and cognitive thinking. Learners think at higher level. As the great inventor, Thomas Alva Edison said, 'the first task of civilization is to teach a person to think'. Taxonomies play an important role in the preparation of training tasks. When preparing tasks for developing of logical, critical, creative thinking, the teacher should use the suitable verbs according to the intended purpose. These verbs are given in the table below.

**Table 2.**

Logical thinking	Critical thinking	Creative thinking
Describe, compare, find similarities and differences, classify.	Evaluate from different points of view. Evaluate its importance and role.	Tell a story, situation, tale, make up music, method.
Build, change, calculate, simplify.	Define the criteria. Make up a table of criteria.	Make up a scheme, layout, model, graphic, compile a book.
Define, give the definition of your own, find the connection.	Find the mistakes. Select and separate the facts without fabrication. Identify controversial points.	Make a prediction, compare and find an analogue. Invent, create, send to another object. Find a new application method.
Make up a scheme, graph, table, compile, continue.	Approach critically. Choose the right one.	Make changes, create, redesign. Create by making changes. Construct.

Analyze, explain, comment, draw conclusions.	Identify the most important objects and events, prove their importance.	Classify on new bases. Adapt to new conditions.
Find the reason (cause and effect).	Substantiate (prove) your idea.	Give your own personal explanation. Identify the problem, make assumptions.
Generalize. Select the main idea.	Find the most efficient way.	Exaggerate. Minimize.
Express the essence, the meaning.	Give advice.	Describe in the form of symbols.

### **Check yourself**

#### **1. What are the reasons for creating new principles of taxonomy in Azerbaijan?**

- A) Identification of new stages of development (learning + development + culture) in cognitive, sensory and psychomotor activities of personality.
  - B) Implementation of curriculum reform in Azerbaijan.
  - C) Formation of separate teaching theory in pedagogical psychology.
  - D) Carrying out extensive research in the field of modification of principles for local conditions.
  - E) Development of the national education system in Azerbaijan.
- A) B) C) D) E)**

#### **2. Identify the correct ideas about educational taxonomies:**

- 1. Taxonomy allows to learn a large amount of material in a short time;
- 2. Taxonomy ensures consistency and coherence of training

objectives;

3. Taxonomy does not ensure a training model;
4. Taxonomy improves the quality of training;
5. Taxonomy assures the congruence of training.

- A) 1,3,5
  - B) 2,4,5
  - C) 1,3,5
  - D) 2,3,4
  - E) 1,2,4
- A)      B)      C)      D)      E)

**3. In what order do taxonomies place the skills?**

- A. The rule of equality
  - B. The rule of hierarchy
  - C. The rule of consistency
  - D. The rule of proportionality
  - E. The rule of accuracy
- A)      B)      C)      D)      E)

**4. Which one does not belong to Bloom's taxonomy?**

- A) application
  - B) organization
  - C) synthesis
  - D) analysis
  - E) evaluation
- A)      B)      C)      D)      E)

**5. On what basis are emotional values determined?**

- A) Purpose
- B) Behavior
- C) Motive
- D) Standard
- E) Taxonomy

**A) B) C) D) E)**

**6. What is meant by psychomotor taxonomies?**

- A) It is about developing values in students' minds.
- B) It is associated with the acquisition of knowledge and the development of mental skills.
- C) It is an ability to react quickly to the environment.
- D) It consists of developing the values and intelligence of students.
- E) It is related to the development of motor skills and physical endurance.

**A) B) C) D) E)**

**7. The creators of psychomotor taxonomy are:**

- A) Simpson, Daves, Beldwin, Bruner, Moore
- B) Beldwin, Bruner, Krathwohl, Bloom, Simpson, Alizadeh
- C) Daves, Beldwin, Bruner, Vygotsky, Masin
- D) Wilson, Gronland, Simpson, Krathwohl, Moore
- E) Masin, Krathwohl, Masia, Wilson, Harppor

**A) B) C) D) E)**

**8. Determine the sequence.**

- A) knowledge, skills, habits, memorizing, understanding, application, evaluation
- B) knowledge, habit, skills, memorizing, understanding, application, evaluation
- C) knowledge, understanding, application, analysis, synthesis, evaluation
- D) skills, habits, understanding, memorizing, application, evaluation
- E) knowledge, skills, habits, memorizing, understanding, evaluation, application.

**A) B) C) D) E)**

**List of recommended literature**

**Chapter X**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>
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5. Bloom's Taxonomy. <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>
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7. Krathwol et al.'s taxonomy of the affective domain. Educational Psychology Interactive. Valdosta, GA: Valdosta State University. Retrieved [date], from <http://chiron.valdosta.edu/whuitt/col/affsys/affdom.html>

## CHAPTER XI

### PRINCIPLES AND RULES OF THE TRAINING PROCESS

#### *11.1. Relationship of principles and rules of the training process*

The principles of training are the main provisions that determine its content, organizational forms, forms and methods according to the general goals and objective laws of the teaching process. Training principles express the normative bases of learning.

In addition to the notion of 'principles' in training theory, there is also the notion of 'training rules'. The rule arises from the principle, concretizes it, obeys the principle. Although rules are based on the principles, they are implemented with their help. It should be noted that the rules generalize both the principles and the practical experience of many generations of teachers. The practical experience of training is mostly reflected in the rules. This is commendable because the best teaching traditions are strengthened, the inheritance is preserved.

Guidelines are provided to teachers in the form of advice for more accurate and complete compliance with the requirements of teaching principles. For example, the following important rules arose from the principle of relevance: from known to unknown, from easy to difficult, from simple to complex, from general to specific (or vice versa).

### ***11.2. The system of principles of the training process***

In the history of the development of didactics, the disclosure of general principles of teaching has always been an actual issue. It is possible on the basis of these principles to identify important didactic requirements and with their help to achieve high results in training. Scientific researches prove that the teaching principles are determined by the goals of education and have a historical character. Formerly, J.A.Comenius put forward the following principles of teaching: use of visual aids, compliance, systematicity and consistency, consciousness and activity, strengthening of knowledge. Nevertheless, A.Disterveg approached this issue differently. He saw didactic principles as the content of teaching, the requirements for students. K.D.Ushinsky put forward the following didactic principles: consciousness and activity in education, use of visual aids, consistency, strengthening of knowledge. Reconstruction (reform) takes place in the context of the principles that retain their importance in the new conditions, and new principles emerge. These principles reflect society's new requirements for teaching. In modern didactics, a provision has been established that teaching principles are historically specific and reflect the main social requirements. Many attempts have been made in the works of modern researchers to develop a system of teaching principles. Some authors have even unreasonably increased the number of principles to 20. Their analysis shows that the basic principles accepted by all are the followings:

- 1) principle of conformity;
- 2) principle of linking theory with practice;
- 3) principle of scientific character;

- 4) principle of consciousness and activity;
- 5) principle of the use of visual aids;
- 6) principle of systematicity and consistency;
- 7) principle of strengthening knowledge.

These principles apply to all aspects of the general pedagogical process both the class-lesson system and the extracurricular and out-of-school educational activities. In addition to this, there are some specific principles of out-of-class and out-of-school education. Essentially, they are derived from the principles mentioned above and are of sub-systematic character.

### ***11.2.1. Principle of conformity***

The following two essential requirements have been established in the centuries-old educational practice:

- 1) to take into account the conformity to natural laws of age development of students;
- 2) to organize and implement the teaching process in accordance with the level of development of students.

The principle of conformity in pedagogy is derived from these requirements.

The following regularities are based on the principle of conformity:

1. The conformity of training is determined by the age characteristics of students and depends on their characteristics.
2. Conformity in training depends on the organization of the educational process and teaching methods used by the teacher. It is related to the conditions in which the learning process takes place.
3. Conformity of training is determined by its previous status.

4. The higher the level of intellectual development, imagination and understanding of students, the more successfully they can learn new knowledge.

5. The gradual increase in learning difficulties and getting accustomed to overcoming them has a serious impact on the development of students and the formation of their positive moral qualities.

6. Building training at the optimal level of difficulty, it positively affects its speed and efficiency, and the quality of knowledge.

The classical rules formulated by Y.A.Comenius on the practical implementation of the principle of conformity are known. These are the rules from easy to difficult, from known to unknown, from simple to complex. Modern training theory and practice have expanded the compulsory rules and recommendations for age-appropriate training. These are expressed in a free style as they are addressed to both teachers and students. This should be so, because the pedagogical process is a creative process.

The following advice of Y.A.Comenius should not be forgotten:

1. Everything that needs to be learned should be distributed according to age periods so that it is understandable and relevant for perception at any age.

2. Remember that students' minds must be prepared to study any subject.

3. Take into account the students' level of preparation and development during teaching, refer to their capabilities when teaching. Study and consider students' life experiences, interests, and characteristics of their development.

4. Take into consideration the age characteristics of students during training so that the content and teaching

methods are slightly ahead of their development.

5. By all means, take into account the individual learning level of each student in the training process, place students in separate small groups, who are studying at the same level.

6. It is necessary to build the learning process at an optimal pace, but do not slow down the strong students, develop the activities of average and weak students.

7. Training requires a certain tension. Otherwise, students are reluctant to work at full capacity. The speed of learning that students set for themselves is usually lower than their ability and strength. Determine the optimal speed according to the specific conditions, change it if necessary.

8. Use the latest achievements of pedagogy and psychology: teach concrete, specific knowledge and skills step by step, and generalize in large steps.

9. Make extensive use of analogies, comparisons, and confrontation to make learning age-appropriate; encourage students to think that even the most complex knowledge can be understood.

10. Involve strong students when teaching new and complex material, and average and weak students when consolidating that material.

11. Facilitate students' assimilation of notions. To do this, compare those concepts with those that are opposite or contradictory.

12. The use of any new notion logically arises from the cognitive task that is set and from the whole previous course of training.

13. The most difficult for students to understand and assimilate are the objective laws of development of society, the fundamental laws of nature. Teachers of all subjects should contribute to the process of formation of methodological knowledge: to do this, show examples of various

manifestations of the general and most general regularities (or consistent pattern) of the subject you teach.

14. Do not complete the training process unnecessarily, do not try to succeed quickly: the pedagogical possibilities for reducing barriers to conformity or compliance are not infinite.

15. Conformity, like persuasiveness and emotionality, depends on the teacher's clear narration and speech: express notions clearly and unambiguously, avoid monotony, and teach using interesting facts and examples from life and literature.

16. Do not say monologues at length: feel what is needed to be explained to students, what they can learn independently, do not explain what students can easily master.

17. When implementing the principle of conformity, focus on managing students' cognitive activity: a bad teacher tells the truth, does not allow to understand it; a good teacher teaches to find the truth, facilitates the process of finding it.

18. Conformity is not making it easy to teach, and the teacher's task is not to constantly facilitate the work of students to acquire, understand and assimilate independent knowledge: to help, to guide, to uncover what is not clear with the help of what is clear, to show, to open a small way for independent analysis, approve it - this is a common way of working in age-appropriate training.

19. Conformity is associated with work ability: developing and training work capacity, help students become accustomed to longer and more intense mental activity. By improving your ability to work, you will reduce barriers to training conformity.

### ***11.2.2. Principle of linking theory with practice***

The practical implementation of linking theory with practice is based on the creative observance of a number of rules. These rules include the theoretical results and experience of the best school teams' activities.

1. It is necessary to substantiate the need for scientific knowledge which is studied at school on the basis of socio-historical practice. It is necessary to teach so that the students can understand and feel that learning is a vital necessity for them.

2. When teaching moves from life to knowledge or from knowledge to life 'knowledge-life' are interrelated and necessary for each other.

3. Regularly reveal the dialectical connection between theory and practice in a deep and convincing way. Prove that science develops under the influence of practical needs, give specific examples, open the pages of people's struggle to make easier the working conditions.

4. Accustom (train) students to test and apply their knowledge. Use the environment as a source of knowledge, as a field of the practical application of knowledge.

5. In every lesson and training, students should be aware of the vital importance of their work.

6. Always use the connection of the school with production. It is necessary to try to continue the educational work of school children with industrial workers.

7. Bring up students with a conscious and positive attitude to labor and common property. Give a personal example of such an attitude.

8. When organizing socially useful work of students, it should be accompanied by independent observations and reflections to induce students to ask questions and stimulate

the need to know and learn more.

9. It should be remembered that the socially helpful work of students should be subordinated to the goals of teaching and upbringing.

10. Apply the scientific organization of labor in the teaching process. Help students master its theory and practice, teach them to apply the most productive and economical methods, analyze, program, and predict their activities.

11. In teaching and upbringing, it is necessary to combine mental activity with practical activity. In this process, 80-85 percent of knowledge is assimilated. Encourage students to try to improve, make better, change their work.

12. Develop and strengthen students' success in one type of work in another.

13. To be the object of principled criticism, be demanding of oneself, critically analyzing one's actions is the path to improvement. If the teacher says, 'students performed poorly in class today', the teacher should add, 'And 'I performed badly myself.'

### ***11.2.3. Principle of science***

The scientific principle requires the knowledge offered to students during teaching to be authentic as determined by science. Meantime, it is necessary to use those teaching methods that are close to the studied methods of science.

The experience of advanced didactic systems has developed a number of rules and recommendations for the implementation of the scientific principle.

1. Teach on the basis of new achievements of pedagogy, psychology, methodology, advanced pedagogical practice

while realizing the scientific principle.

2. Use the logic of both inductive and deductive teaching wisely, taking into account the new achievements of teaching, educational and upbringing theory, and learning psychology, and even boldly apply abstraction in primary school because it helps deepen the understanding of concrete, specific. At the same time, try to avoid abstractions that do not have a complete, correct definition (explanation) in the school curriculum.

3. Explain the logic of the subject because it provides a reliable basis for a close acquaintance with new scientific notions from the first moment of studying the subject.

4. Educate schoolchildren in a dialectical approach to the objects and events studied, help them with the formation of the elements of their scientific-dialectical thinking.

5. Use scientific cognitive methods in teaching. Develop students' thinking by directing them to search and creativity in the teaching process.

6. Systematically inform your students about new science, technology, and culture achievements. Connect new achievements with the knowledge system formed by students.

7. While teaching the subject, regularly review new scientific notions that are recently included in the subject, otherwise they may be forgotten.

8. Do not limit the acquaintance with new ideas, new perception to a separate work; look through any event in new relationships.

9. Do not miss the opportunity to acquaint students with the biographies of prominent scientists, and their contribution to science development.

10. Explain the methods and difficulties of scientific cognition to students, show the dependence of results on methods.

11. Use the latest scientific terminology, do not use outdated terms, keep abreast of the latest scientific achievements in the subject.

12. Explain the genesis of scientific knowledge, the embryology of truth, consistently implement the historical requirements in teaching.

13. In connection with the increase of scientific information, pay special attention to the main problems of science, reveal the main ideas of scientific achievements to students, accustom them to follow scientific information, encourage collective discussion of scientific-technical and social problems.

14. Do not ignore controversial scientific problems in the upper grades, in an appropriate form, disclose the content of those problems and perspective ways of solving them, if possible, organize a discussion.

15. Encourage students to master new notions and terms in the unity with scientific theories and laws.

16. Give students the opportunity to rejoice at their achievements, experience a sense of success, and enjoy intense cognitive activity.

17. When highlighting new achievements in science and technology, do not forget to talk about the improvement of teaching technology, show the difficulties of educational labor and ways to increase its efficiency; confidently promote the ideas of scientific organization of educational work.

18. Avoid using ambiguous and false expressions, which may lead to unsound perceptions. Students should not be allowed to misinterpret what the teacher says at school, especially in the first and second grades. This does not mean that it hinders the development of children's imagination. But it is important to know that serious things must be taken

unequivocally.

19. Encourage students to do research. Take the time to acquaint them experimental and practical work techniques, primary sources and informative materials, and the purification of archival documents.

#### ***11.2.4. Principle of consciousness and activity***

The principle of consciousness and activity reflects the nature of students' activities in the training process, their attitude to learning.

It is recommended to follow the rules and advice of training to put into practice the principle of consciousness and activity.

1. A clear understanding of the goals and objectives of the work is necessary for conscious learning: show it to students, explain its importance and significance, and uncover its perspective.

2. Explain to students why they need to do this or that operation just this way.

3. When teaching, use all forms of cognitive activity, combine analysis with synthesis, induction with deduction, use analogy more often, the younger the student is, start with induction as earlier as possible.

4. Ensure that the meaning of each word, sentence, and notion is understood: use figurative comparisons based on the students' knowledge and experience.

5. Use students' mutual learning power. Sometimes a student understands better and easier what his partner is saying on the same subject than what the teacher is saying. Therefore, the teacher does not need to share the material that active students can explain to their peers. Provide conditions for the collective search for the correct answer to the

question.

6. Do not spare time and efforts to bring up the activity of students; remember that today's student will be an employee of the future, a member of society.

7. Create a logical connection between the unknown and the known for the students. There is no logical connection between the acquired knowledge and the knowledge to be acquired, so learning cannot be conscious.

8. Teach and bring up in such a way that the student becomes an active subject who masters the subject. Remember that the student's personality is formed not only by the subject, but also by the teacher's activity, by personal example.

9. Put students in situations where they can see the difference between the facts they observe and the knowledge they have and do not have difficulty to explain it.

10. Training will be successful if an optimal number of examples accompanies the explanation of each rule.

11. Teach students to distinguish between primary and secondary in the material studied. Firstly, separate the primary and achieve its understanding and assimilation. Give examples for this.

12. There is no need to teach everything only on the basis of reputation; it is necessary to teach everything with the help of evidence-based on feelings and reason.

13. Help students assimilate the most productive methods of cognitive activity, teach them to learn.

14. Control internal (distraction, other activities in the classroom, etc.) and external (tardiness, i.e., being late for class, violation of discipline, etc.) factors that distract students from the object of learning, eliminate the causes that negatively affect the educational-upbringing process.

15. To teach students to think, use the question ‘why’ as often as possible. Understanding cause-and-effect relationships is one of the conditions of developmental learning.

16. The knowledgeable student is not the one who speaks, but who puts it into practice.

17. Regularly study the individual interests of students, develop and guide them according to their personal and social needs.

18. Make the extensive use of practical situations in training. Require students to independently understand and comprehend the differences between the facts they observe in life and their scientific explanation.

19. Teach in the way that the knowledge become a belief, be a guide for action.

20. Teach students to think and act independently. Don’t let them copy or tell each other.

21. Use comprehensive analysis of the problem to develop students’ creative thinking. Solve cognitive tasks in several logically different ways, use more creative tasks.

22. The ability to ask questions and listen to answers is one of the important conditions to stimulate and motivate students to be active. If the teacher listens to their students, so the students do listen to their teacher.

#### ***11.2.5. Principle of the use of visual aids***

The history of the principle of the use of visual aids is ancient. It is based not on abstract words but on specific things and events that the child perceives directly.

It is recommended to take into account a number of requirements and apply recommendations when using visual aids in teaching practice.

1. The use of visual aids in teaching helps to assimilate the subject quickly, easily and consciously, keep in memory firmly, and activate all students.

2. Children think in forms, colors, sounds. Generally, they think in emotions that is why there is a need to use visual aids in teaching. It should be based on concrete images that the child perceives directly, but not on abstract notions and words.

3. The teacher should present everything that the senses can perceive, i.e., what is seen to the sense of sight, the sound to the sense of hearing, the smell to the sense of smell, the taste to the sense of taste, what can be touched to the sense of touch. This should be the 'golden rule' for teachers.

4. When teaching and educating, don't forget that visual aids help to create a correct, accurate picture of the objects and events that are being studied.

5. To make visual aids more effective, students' observation must be closely linked to their active thinking. Students need to be taught to find the main features of the objects and processes they observe, distinguish between the connections and dependencies between them, make generalizations, and draw conclusions based on the comparisons and analysis.

6. The effectiveness of visual aids depends on the relationship of the teacher's speech with the observation of students. Such connection can take many forms: demonstration of visual aids can come before or after a teacher's speech.

7. The visual aids for demonstration should be prepared in advance by the teacher.

8. Apply modern visual aids in a scientifically grounded manner. At the same time, bring up students's attention,

observation, a culture of thinking, constructive creativity, interest in learning.

9. Visual aids should be used in the classroom when necessary, at all stages of the learning process – both in the acquisition of knowledge and in the consolidation and application.

10. All visual aids should be used appropriately during teaching. When needed, different visual aids can be used together coherently, which greatly simplifies the learning process and positively influences on it.

11. Teaching process should not be limited to the use of visual aids: visual aids are a means of learning and developing thinking.

12. When teaching and upbringing, remember that it is easier for learners to understand notions and abstract provisions when reinforced by concrete facts, examples, pictures, and images. To reveal their essence, it is necessary to use different types of visual aids.

13. It is impossible to use different types of visual aids at once in the class, to be keen on visual aids completely, and to build all lessons on visual aids. This distracts students, hinders their comprehension, deepening of knowledge, development of abstract thinking, understanding of general objective laws.

14. It is more effective to use visual aids not in every lesson, but only when students have little or no idea about the topic.

15. Visualization should be used as an illustration and as an independent source of knowledge to create a problem-based situation.

16. Depending on the age characteristics of students, it is necessary to gradually move from natural and figurative means to descriptive-schematic and symbolic visual aids.

17. Modern visual aids allow students to organize their research work effectively.

18. Prepare visual aids together with the students. The visual aids designed by the students are superior to any other tools.

19. Develop students' emotional experience when using visual aids. A reference to previously formed ideas concretizes the learned notions.

20. Remember that the use of visual aids in the classroom teaching system is wide: it requires a serious approach to the visual aids, careful planning, and determining the volume.

#### ***11.2.6. Principle of systematicity and consistency***

The principle of systematicity and consistency in practical activities is implemented by the following rules and recommendations.

1. Use diagrams and plans to ensure that students master the knowledge system. Divide the content of the educational material into logically complete parts, follow them coherently, and teach students to do so, i.e., accustom them to it.

2. Do not include any issue in the lesson plan that is not expected to be explained in detail.

3. Do not allow the system to be disrupted in both content and teaching methods, and if the system is compromised, eliminate it quickly.

4. The subject of teaching is a reduced copy of science. Show students its system, form their understanding of the subject, which is a part of science, a real being. Regularly use interdisciplinary integration.

5. Use a proven scheme of formation of theoretical knowledge: a) explain the basis of the theory; b) explain the

tools of the theory; c) explain the result of the theory; d) specify the limits of its application.

6. Ensure consistency in both the content of education and teaching methods.

7. Use the advanced achievements of teaching methods; Together with the students, draw up a curriculum, structural-logical scheme of the educational material. They facilitate the process of assimilating knowledge.

8. Frequently review and refine previously attained material to ensure sistematicity and consistency in teaching.

9. Short and resumtive or generalizing revisions should be given at the beginning of the lesson (*usually summarizing previously learned material*) and at the end of it (*to strengthen the basic knowledge gained during the lesson*) when commenting on individual issues of the topic.

10. There is no need to add anything to the new material. Ideas that are artificially added to a lesson topic (educative, developmental, and upbringing) reduce the value of the lesson. With this in mind, plan important ideas for the entire learning process in accordance with the content of teaching and the students' capabilities.

11. Not only language teachers, but all subject teachers should monitor the order and form in which students express their opinions in all lessons.

12. Get students accustomed to independent work constantly and patiently. Gradually complicate the work and create opportunities for independent solutions to more difficult, complex problems. Do not work instead of students, better to help them.

13. Show students the perspectives of their education often.

14. Do not forget that understanding a system requires logic, and the formation of it requires feelings and emotions.

Teach with enthusiasm, use interesting facts from life and literature. Notions explain, images draw attention, stimuli inspire action.

15. At the end of the units and courses, necessarily give lessons of generalization and systematization.

16. Regularly and kindly correct mistakes made by students in oral and written assignments. Teach students to analyze their mistakes systematically.

17. Do not reactivate the activity of tired students by artificial methods. Follow the physical norms of students' active mental activity, anticipate and plan for the rise and fall of activity.

18. Do not try to teach the material to be learned in one lesson but instead in several lessons.

19. Require students to master the system of knowledge, skills and habits for each program section.

20. Remember that the well-established system of knowledge is an important tool to prevent them from being forgotten. Forgotten knowledge is quickly restored when it has its own system. When knowledge is unsystematic, it is forgotten and restored with great difficulty.

21. Do not forget the advice of Y.A.Comenius: everything should be done in an unbreakable sequence so that the knowledge gained today could strengthen the past and open the way to what we will learn tomorrow.

22. Train students to see and observe the signs of events, objects, and human relationships on a regular, systematic, and purposeful basis.

#### ***11.2.7. Principle of strengthening knowledge***

The mastery of knowledge is a very complex process. Recently, the study of this process has yielded new results. A

number of studies have shown that involuntary memorization is often more productive than voluntary memorization. This leads to a change in teaching practice, as it has traditionally been believed that learning should be based on voluntary memorization. This is not unreasonable. Accordingly, there were defined practical rules. The modern understanding of teaching activities allows new ones to add to the traditional rules and offer some recommendations to teachers.

1. In modern teaching, thinking ‘dominates’ over memory. Save students’ energy, do not use those forces to memorize less important knowledge, do not damage the mind and do not overload the memory.

2. Do not allow to be strengthened in the memory the material that is not well perceived or understood by the student. Students must keep in memory consciously mastered and well-thought-out knowledge.

3. To free students from learning auxiliary material, teach them to use various information books, dictionaries (spelling, explanatory, technical, geographical, etc.), encyclopedias, etc.

4. The material to be kept in the memory should not be large. Remove anything that students can easily acquire from the list of knowledge that they need to remember.

5. Remember that forgetting the studied material occurs more intensively after training, therefore the time and frequency of revision and repetition should correspond to the psychological objective laws of forgetting.

6. When intensifying the involuntary memory of students, do not give direct assignments and instructions; keep students interested.

7. The frequency of repetition or revision should correspond to the course of the memory curve. Once students are acquainted with the new material, they need to repeat it

more often. Because this time, the information has the feature of maximum loss. After that, the number of repetitions or revisions should be gradually reduced, but not completely stopped.

8. Control internal (distractions, extraneous activities, etc.) and external factors (being late for class, violating discipline, etc.) that distract students. Fight against laziness, form an optimal pace of activity. Get each student accustomed to working to their potential but at full capacity.

9. Do not start teaching students new material without creating interest and a positive attitude towards it firstly.

10. Wait for the sequence of teaching the educational material. The knowledge that is logically connected is assimilated more firmly than fragmentary information.

11. When the pace of workouts is slowing down, immediately determine the cause. The most common reasons are students' lack of interest in the learning process and tiredness. Look for ways to eliminate them. Do not artificially intensify training.

12. Do not overload students unnecessarily, and by giving them many assignments and instructions. Get students accustomed to listening. Be careful and discreet when talking about more interesting things to them. Create exciting moments in lessons, tell instructive, edifying stories, legends, fables, jokes instead of admonishing, reminders.

13. Refer to the fact established by science: independent revision of students is an important form of strengthening knowledge. Therefore, make extensive use of mutual learning processes, guide them skillfully. Quality that a teacher cannot form for a long time is often easily and quickly formed through mutual learning.

14. Develop students' memory. Teach them to use

various techniques to make them easier to remember.

15. Use a differential approach to teaching material. Make sure that each student consciously, deeply, and firmly grasps the most important parts of material.

16. Create positive motivations and stimuli in advance for students to teach new material. Remember: knowledge implanted in a child's soul by force is not lasting.

17. Organize the revision and consolidation of the material studied so that it could activate not only the students' memory but also their thinking and feelings. While working on understanding and consolidating knowledge, expand its volume (knowledge) with new examples, clarifying generalizations, and illustrations.

18. Do not repeat the learned material according to the scheme was used when teaching it. Allow students to look at the material from different angles.

19. Use emotional expression, visual and technical aids, didactic games, discussions to consolidate knowledge.

20. When teaching new material, connect it with the previous one and revise it within the new knowledge.

21. Memorizing information obtained in logical structural forms is stronger than unrelated knowledge. Therefore, it is necessary to strengthen the logically presented knowledge of whole structures.

22. Do not give students easy and identical work: they develop less and get tired quickly. Choose meaningful activities. Completing tasks and solving problems motivate students to think actively and look for rational solutions. It is efficient to compare the results with the conditions of the problem.

23. Prevent students from getting exhausted while doing exercises.

24. Control the factors related to the evaluation of

students' work: consistently form a conscious and responsible attitude to any activity, accustom students to monitor their work process and its results.

25. Independent revision of knowledge by students is one of the most important forms of consolidation of knowledge. Do not allow students to abstain from lessons, avoid classes, or be idle. These will lead to weakening of the knowledge and skills of students.

There is a close connection between the principles described above, and they ensure the effectiveness of the learning process in a complex way. The task is to organize activities on their basis.

***Check yourself.***

**1. Define the complete line of the basic principles of the training process.**

A) the principle of linking theory with practice; the principle of conformity.

B) the principle of visual aids; the principle of science.

C) the principle of conformity; the principle of linking theory with practice; the principle of science; the principle of consciousness and activity; the principle of visual aids; the principle of systematicity and consistency; the principle of strengthening knowledge.

D) the principle of systematicity and consistency; the principle of strengthening knowledge.

E) the principle of science; the principle and activity of consciousness.

**A) B) C) D) E)**

**2. Match the basic principles of the training process to the related statements.**

1. *Principle of conformity.*
2. *Principle of linking theory with practice.*
3. *Principle of science.*
4. *Principle of consciousness and activity.*

- a) The logic of the subject provides a reliable basis for a close acquaintance with new scientific notions from the first moment of studying the subject
- b) The higher the level of intellectual development, imagination and understanding of students, the more successful they can learn new knowledge.
- c) Control both internal and external factors that distract students from learning, eliminate the causes that negatively affect the educational-upbringing process.
- d) When teaching, move from life to knowledge or from knowledge to life: 'knowledge-life' are interrelated, necessary for each other.

- A) 1b; 2d; 3a; 4c    B) 1a; 2b; 3c; 4d    C) 1d; 2c; 3a; 4b**  
**D) 1b; 2c; 3d; 4a    E) 1c; 2b; 3d; 4a**

**3. Match the basic principles of the training process to the related statements.**

1. *Principle of linking theory with practice.*
2. *Principle of the use of visual aids.*
3. *Principle of systematicity and consistency.*
4. *Principle of strengthening knowledge.*

- a) In teaching and upbringing, it is necessary to combine mental activity with practical activity. In this process, 80-85 percent of knowledge is assimilated. Encourage students to try to improve, make better, change their work.

b) When teaching and bringing up, remember that it is easier for learners to understand notions and abstract provisions when reinforced by concrete facts, examples, pictures, and images.

c) Memorizing information obtained in logical structural forms is stronger than unrelated knowledge. Therefore, it is necessary to strengthen the logically presented knowledge of whole structures.

d) Y.A.Comenius: everything should be done in an unbreakable sequence so that the knowledge gained today could strengthen the past and open the way to what we will learn tomorrow.

**A) 1b; 2d; 3a; 4c    B) 1a; 2b; 3d; 4c    C) 1d; 2c; 3a; 4b  
D) 1b; 2c; 3d; 4a    E) 1c; 2b; 3d; 4a**

### **List of recommended literature**

#### **Chapter XI**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/Pedagogyand-Practice.html?id=qkW0uPu61egC>

2. 10 Basic Employee Training Principles. <https://readytrainingonline.com/articles/employee-training-principles/>

3. Learning Principles in Training and Development. <https://raccoongang.com/blog/learning-principles-training-and-development/>

4. Your Guide to Basic Training Principles. <https://www.trainingpeaks.com/blog/your-guide-to-basic-training-principles/>

5. Teaching Principles. <https://www.dli.kennesaw.edu/resources/pedagogyforonlineteaching/seven-teaching-principles.php>

## CHAPTER XII

### METHODS OF THE TRAINING PROCESS

#### *12.1. Classification of training process methods*

The question of ‘how to teach’ to ensure succession (inheritance) between generations has been one of the traditional didactic questions throughout history. Various methods have been found in this response. ***Teaching method is a regulated activity of teachers and students to achieve a certain goal in teaching.*** Teaching methods are understood as ways to achieve goals and solve educational tasks. In the structure of teaching, methods and techniques (styles) also differ. A technique is an element of a method, an integral part of it. It is a separate step in the application of the method. The purpose, content, objective laws, principles and forms of teaching are reflected in the teaching methods. Neither the purpose, content, or forms of the work can be determined without considering the practical feasibility of the methods. It is the methods that provide these opportunities.

The classification of teaching methods is understood as a system, regulated on the basis of certain characteristics of these methods. In pedagogy, there are different classifications of teaching methods. They differ in their essence and characteristics:

**1. Traditional classification of teaching methods.** This classification takes its origins from ancient philosophical and pedagogical systems. The sources of knowledge are taken as a general feature for the methods included in the classification. There are three sources from ancient times: **practice, use of visual aids, word.** In the course of cultural

progress, a book was included in their sources. In recent decades, video, a powerful source of information, has joined them with new computer systems. In this classification, five methods are distinguished: practical, visual, verbal, work on the book, and video methods. Each of these general methods has its modification.

**2. Classification of methods according to the teaching tasks to be performed.** In this classification, the successive stages of the lesson, i.e., the educational process acts as a common feature. According to this feature, the following methods are distinguished here:

- 1) to acquire knowledge;
- 2) to form knowledge and habits;
- 3) to apply knowledge;
- 4) creative activity;
- 5) strengthening;
- 6) verification and assessment of knowledge, skills, habits.

This classification of methods is related to the classical scheme of teaching. Classification also helps teachers carry out the educational process and simplify the nomenclature of methods.

**3. Classification of teaching methods according to sources of knowledge.** According to this feature, teaching methods are divided into three groups:

- 1) verbal methods;
- 2) visual methods (techniques);
- 3) practical methods.

This classification, which is relatively simple and suitable for practical use, and is widely used in the modern pedagogical literature, has not been accepted by most scientists and specialists. It can be explained that verbal

methods are actively involved in applying visual and practical methods.

**4. Classification of methods according to cognitive activity type (nature).** The following methods are distinguished in this classification:

- 1) explanatory-illustrative (information-receptive);
- 2) reproductive;
- 3) problematic comments;
- 4) partial-search (heuristic);
- 5) research.

The essence of the explanatory-illustrative (or information-receptive) method manifests itself in the following features:

- 1) knowledge is offered to students in a ready-made form.
- 2) teacher organizes the perception of this knowledge in different ways.
- 3) students perceive, comprehend this knowledge and keep it in their memory. All sources of information (words, visual aids, etc.) are used in the process of perception. The transmission sequence can be developed both inductively and deductively. The executive activity of the pedagogue is limited to the organization of knowledge perception.

The following features are noticeable in the reproductive method of teaching:

1. Knowledge is offered to students in a ready-made form.
2. Teacher not only imparts knowledge but also explains it.
3. Students consciously acquire knowledge, understand and remember it. Proper expression of knowledge is considered a criterion of mastery.
4. Their repeated revision ensures strong mastery of knowledge.

The main advantage of both the reproductive and

explanatory-illustrative methods is their efficiency. Efficiency allows to transfer a large amount of knowledge and skills in a short time and with little effort. Thanks to a lot of revision and repetition, the strength of knowledge can be significantly higher.

Human activity can be reproductive, executive or creative. Reproductive activity precedes creative activity. Therefore, it (reproductive activity) cannot be denied in teaching. However, being excessively addicted to it is also wrong. The reproductive method should be used in interrelation with other methods.

The method of problem interpretation is the transition from performance to creative activity. At a certain stage of teaching, students are still unable to solve problems independently. Therefore, the teacher shows how to research the problem by interpreting it from beginning to end. Students are not active participants in the educational process when applying such a teaching method. They just observe the process of thoughts of the teacher, learn ways to overcome cognitive difficulties.

The essence of the partial search (heuristic) teaching method is manifested in the following characteristics features:

1. Knowledge is not offered to students in a ready-made form; it must be acquired independently.
2. The teacher organizes the search for new knowledge by various means.
3. Students express their thoughts under the teacher's guidance, solve cognitive problems, create problem-based situations. They conduct analysis and comparisons, summarize, draw conclusions, etc. As a result, they develop well-thought-out solid knowledge.

This method is called ‘partial search’ because cannot always solve complex learning problems independently from beginning to end. Therefore, the teaching activity develops according to the following scheme: teachers-students, etc.

Some of the knowledge is imparted by the teacher, and some is acquired by the students themselves by answering questions or solving problems. One of the modifications of this method is a heuristic interview.

The essence of the research method of teaching is reflected in the following features:

1. Teacher forms the problem with the students, a certain part of the study time is devoted to its solution.

2. Students are not informed about knowledge. Students acquire them independently in the process of solving problems (researching) by comparing different possible answers to the questions. Students also determine the means to achieve results.

3. Teacher's activity consists of operational management of the problem-solving process.

4. The teaching process is characterized by high intensity, high interest in learning, differs in the depth and strength of the acquired knowledge.

The research method involves the creative acquisition of knowledge. Its disadvantages are that teachers and students spend a lot of time and energy on it. Application of the research method requires a high level of pedagogical skills.

**5. Classification of methods according to training purposes.** These methods are divided into two groups:

- methods that help to assimilate the educational material (information and developmental methods: teacher’s narration, interviews, work on a book); heuristic teaching methods: heuristic interview, debate, laboratory work; research method.

- methods that help to strengthen and improve the acquired knowledge: exercises (interpretive research exercises, variable exercises, selective exercises (on sample, etc.), practical work.

**6. Classification of methods according to the function of educational-cognitive activity.** In this classification, methods are divided into three major groups:

- methods of organizing and implementing educational and cognitive activity: verbal, visual, practical teaching methods; inductive and deductive teaching methods; reproductive and problem-search methods; methods of independent work and work under the guidance of teacher;

- methods that stimulate and motivate educational and cognitive activity: methods that stimulate and motivate interest in studying; methods that stimulate and motivate the duty and responsibility for studying;

- methods of control and self-control over the effectiveness of educational and cognitive activity: methods of verbal control and self-control; written control and self-control methods; methods of laboratory-practical control and self-control.

**7. Classification of methods according to common features.** Many attempts have been made to classify binary (double, two-part) teaching methods. In this classification, methods are grouped according to common characteristics. They are divided into two groups: teaching methods and learning methods.

Teaching methods include: information; explanation; instructional-practical; explanatory-incentive; incentive methods. Learning methods include: performance, reproductive, efficient-practical, partial-search and search methods. Teaching methods and learning methods are interrelated.

There are other classifications as well. None of the classifications we have considered above are perfect. It has been determined that the methods educate, develop, stimulate (motivate) and they have the control-corrective functions in the learning process. The goal is achieved by using the method, which is its teaching function. The speed and level of students' development (developmental function) and learning outcomes are determined by the methods.

### ***12.2. Characteristics of the methods of the training process***

Despite the emergence of new teaching methods (software teaching methods, video methods), verbal (word) methods in teaching will continue to be important due to their naturalness and environmental affability. Teacher's explanation is carried out in narration, explanation, interview, lecture, instruction. It is connected with all the links of the teaching process. **Teacher's explanation** is used when giving a cognitive task, presenting new educational material in any way, organizing students' independent work and feedback, supervising students' activities, and in other cases. Teacher's explanation is included in all teaching methods:

**1. Narration** is a teacher's vivid, figurative narration of a particular event, a monological expression of educational material. The leading function of this method is to teach. At the same time, this method performs developmental, educative, stimulating and controlling-corrective functions. When using this method, knowledge is conveyed to students consistently, systematically, comprehensibly, and emotionally. The method of narration is mainly used in primary schools.

There are three types of method of narration according to

the purpose of the use of it: **introductory narration, descriptive narration, final narration.** The task of the introductory narration is to prepare students to learn new material. Descriptive narration is narrating, telling the intended content. The final narration is the completion of training.

The effectiveness of the narrative method depends mainly on the teacher's ability to narrate and the appropriateness of the words and expressions the teacher uses to the level of understanding and development of students. Therefore, the content of narration should be based on the student's experience, at the same time expand that experience and enrich it with new elements. Narration should be coherent, logical, convincing and teach students to express their ideas correctly and competently.

While preparing for the lesson in the classroom, the teacher makes a plan, collects the necessary material, selects methodological approaches to achieve the goal maximum in the current situation. Uses logical techniques such as comparison and generalization to speed up and facilitate memorization. During the narration, the main idea is emphasized. Narration should be short (up to 10 minutes), flexible, and performed on a positive emotional background. The efficiency of narration depends on its compatibility with other methods. For example, it depends on the illustration in the primary grades, interview in the middle and upper grades, the place and time of the narration, the facts, events, and people involved in the narration.

**2. Explanation** explains the rule, objective laws, tasks, assignments with evidence and proof. In teaching subjects, narration and explanation are often applied in unity. The teacher first narrates the particular event, then explains it, or

describes a separate fact or event during the explanation.

**3. School lecture.** Complex systems, events, processes, their connections and dependencies, cause-and-effect relationships are described in a school lecture. Therefore, school lectures are used only in the upper grades because students are already ready to comprehend and understand the lecture material. A lecture covers one lesson in volume.

The effectiveness of a school lecture depends on the following conditions:

- 1) developing the lecture plan;
- 2) acquainting students with the plan, topic, purpose and tasks of the lecture;
- 3) logically complete and consistent interpretation of all items of the plan;
- 4) brief summary after interpretation of each item of the plan;
- 5) creation of a logical connection when moving from one part of the lecture to another;
- 6) problematic and emotional nature of the lecture;
- 7) the vitality of the speech, inclusion of examples, comparisons, facts in the content of the lecture;
- 8) communication with the class (audience), flexible management of students' intellectual activity;
- 9) the optimal speed of transmission (interpretation) for students to write the main provisions of the lecture;
- 10) pre-determination of the material to be written by dictation to students;
- 11) the use of visual aids (demonstration, illustration, video) that facilitate the comprehension and understanding of the provisions to be studied;
- 12) adaptation of the lecture to seminars and practical classes.

A lecture is considered one of the most effective ways to

save lesson time. Thus, the rate of the perception of information content varies from 20% to 50%, depending on various conditions.

**4. Interview** method is one of the oldest didactic methods. Socrates used this method very skillfully in his time. The leading function of the interview method is the stimulant function, i.e., the activation of students. But this method also successfully performs other functions. The essence of the interview method is that the teacher, with the help of purposeful and skillful questions, reminds students about the knowledge already known to them and achieves the acquisition of new knowledge through independent thinking, drawing conclusions, and making generalizations. The interview makes the student follow the teacher's opinion. As a result, students move forward to acquire new knowledge step by step. The advantage of the interview is that it maximizes the student's thinking, and it is a good tool to diagnose the acquisition of knowledge and skills, helps to develop students' cognitive abilities, creates conditions for the operative management of the cognitive process. The educative role of the interview is also significant.

There are several rules for classifying interviews. There are the following types of interviews depending on the objectives to be performed:

- 1) introductory or organizational interview;
- 2) interview giving new knowledge (Socrates interview, heuristic interview);
- 3) synthesizing or reinforcing interview;
- 4) control-corrective interview.

An introductory interview is usually conducted at the beginning of the course. Its purpose is to reveal students' understanding of the importance of the work ahead. The

interview conducted before the organization of laboratory and practical classes, excursions, and studying a new topic has a significant effect.

An interview that provides new knowledge is in the form of **questions and answers** (in this case, the students' answers cannot be disputed), **Socrates form** (in which students respect the question, can doubt and disagree with it), and **heuristic form** (in this case, the student is faced with problems and required to give their answers the questions asked by the teacher).

The success of the interview depends on the relationship with the class. All students should actively participate in the interview, listen carefully to questions, analyze their answers and take the initiative to express their opinions.

It is important to remember that interviewing is a time-consuming and complex training method. Therefore, for a successful interview, the teacher must consider the capabilities of himself and the students.

**5. Training discussion** is a part that newly enters the school practice. It has long been used successfully in Western educational institutions. The meaning of this method is to exchange views on a certain problem. With the help of discussion, students acquire new knowledge and defend their positions. The main function of the educational discussion is to stimulate students' cognitive interest. It also performs auxiliary functions as educational, developing, educative, and control-corrective.

The important condition for the effectiveness of an educational discussion is its thorough preparation both in content and form. In terms of content, students should gain the necessary knowledge for the upcoming discussion. In terms of form, students should be prepared for the rules for expressing their knowledge. When they do not have certain

knowledge, the discussion becomes meaningless and senseless. If students do not have the ability to express themselves, if they cannot convince their opponents, then the discussion is not attractive. Therefore, the teacher should develop students' ability to express their ideas clearly and precisely, to ask questions unequivocally.

Discussions enrich the content of material that is already known to students, helping to organize and consolidate it. Here, the teacher also receives reliable information about the depth and system of students' knowledge, their thinking characteristics. This information helps the teacher determine the direction of future work. Discussions are also beneficial from the upbringing point of view. With their help, not only the character, temperament, memory, thinking features of students are diagnosed, but also the shortcomings in behavior and communication are corrected.

Elements of discussion are used in the middle classes and in full volume in the upper classes. Students acquire the ability to discuss.

**6. The method of illustration** involves the assimilation of educational material with the help of visual aids. In this case, the facts and events are static-motionless. Visual aids have different meanings in training. In some cases, it is just a demonstration, and in some cases, it facilitates the process of assimilation of abstract ideas. There are the following types of illustrations:

- 1) naturally the thing itself;
- 2) model of the thing;
- 3) picture of the object and event;
- 4) schematic materials (tables, diagrams, schemes);
- 5) symbolic visual aids (map, globe), etc.

Visual aids should be used as needed in the learning

process if it is necessary to use them. The effectiveness of illustration depends to some extent on the method of its demonstration. Determining the optimal amount of illustrative material is of a interest from methodical point of view. Experience shows that the use of many illustrations in a lesson distracts students' attention and does not let them penetrate deeply into the essence of the event being studied. The scope of students' attention is limited; they cannot focus on several visual aids at the same time. In this case, it is difficult to focus on the essence – the main thing. Therefore, certain conditions must be followed in its application for the illustration method to be effective:

1) the place and type of visual aids must be correctly identified in the training process;

2) visual aids should not be used all the time but should be used when students do not have a complete picture of the object or event being studied;

3) all students should be able to see the visual aids clearly;

4) students' activity should be ensured during the illustration;

5) the teacher's explanation should be linked to the students' observation of the visual aids.

**7. The method of demonstration** is the demonstration of an object or event in the dynamics, that is, in the state of change and development. The demonstration method is more effective when students learn about objects, processes, and events on their own. Demonstration is an active method of cognition. There is a big difference between a demonstration and a simple display of an object. In the process of active demonstration, which is of a problem and research nature, students' attention is drawn to the main properties of the object, the event. As a result, schoolchildren understand these

objects and events easily, quickly, and completely. To increase students' independence, they need to be involved in explaining what they see. Demonstration of real events or processes, **real things** is of great importance. It is always difficult to create such a demonstration. Therefore, demonstration of natural objects in artificial conditions (for example, showing animals in a zoo) or demonstrating artificially created objects in natural conditions (for example, a miniature copy of mechanisms) is organized.

**8. Video method.** Video method involves the inductive and deductive acquisition of knowledge, students' independence, and different levels of their cognitive activity. Transmission of information through the screen is intensively being included in the work practice of educational institutions. Video method serves not only to impart knowledge but also to control them, strengthen knowledge, revise and repeat, generalize, and systematize them. Thus, the video method successfully performs all didactic functions.

The use of video methods in the teaching process creates conditions:

- 1) to provide students with more complete and accurate information about the events and processes studied;
- 2) to increase the role of visual aids in the educational process;
- 3) to meet the needs, desires, and interests of students;
- 4) to exercise control over knowledge and skills and to correct them, to release the teacher from technical work related to checking notebooks;
- 5) to create effective feedback;
- 6) to organize complete and systematic control and objective assessment of students' learning outcomes.

Many didactic and educational tasks are effectively

solved with the help of video method. It is useful:

1) to interpret new knowledge, especially very slow processes (for example, plant development that cannot be directly observed), as well as rapid processes (when it is not possible to reveal the essence of the event by direct observation, such as crystallization of substances, etc.);

2) to explain the principles of operation of complex mechanisms and machines in dynamics;

3) to create a specific language environment in foreign language classes;

4) to organize test trials;

5) rationalize the teaching process, increase its efficiency, etc.

A teacher using a video method is required to acquaint students in detail with the problems being studied, direct their activities towards generalizing the results, and help them in the process of independent work. The effectiveness of the video method depends very little on teacher's personal skills. Efficiency directly depends on the quality of the video equipment and the technical means used in the teaching process. The video method makes high demands on the organization of the educational process. This process must be selected with precision and expediency.

**9. Exercises.** Exercises, practical and laboratory work, cognitive (didactic) games, and research methods are important in transforming students' knowledge into skills and habits in the learning process. Gradual and systematic exercises make reading and learning successful and productive. The advantage of this method is that it ensures the effective formation of knowledge and skills. The disadvantage of this method of study is that it performs poorly the functions of arousing interest in reading and learning. It is impossible to acquire training, practical skills

and habits without well-organized exercises.

There are different types of exercises: **specific exercises**, **derivative exercises**, **interpreted exercises**. Specific exercises are repeated many times, and form training, labor skills and habits. If specific exercises include components of previously applied exercises, they are called derivative exercises. Derivative exercises help to repeat and strengthen previously formed habits. The habit is forgotten without derivative exercises. Interpreted exercises shape the learning process and carry out teaching tasks consciously. Their essence is that teachers and students interpret the operations they perform. As a result, those operations are better understood and mastered. At first, the best students are involved in these exercises. Then the whole class participates in the explanation of the material. The method of interpretive exercises provides a high speed of the lesson, helps all students to master the material consciously and firmly.

Oral exercises are also widely used in the training process. They help to develop students' speech culture, logical thinking, and cognitive abilities. The purpose of oral exercises is different. They are of great importance in learning foreign languages. Oral exercises gradually become more difficult depending on students' age and level of development. Written exercises (stylistic, grammatical, spelling, essays, reviews, problem-solving, description of experiences, etc.) are the important component of teaching. Their main goal is to form, develop and strengthen the necessary knowledge and skills. Graphic exercises are used in the process of industrial training, in teaching mathematics, physics, drawing, geography, fine arts. Laboratory-practical exercises help to master the skills of using labor tools and laboratory equipment.

Depending on students' level of independence, three types of exercises are distinguished: selective (on sample) exercises, variable exercises and creative exercises. Selective exercises aim to recall the knowledge gained, and apply it in accordance with the given example. Variable exercises serve to apply knowledge in new conditions. Creative exercises are based on the creative application of knowledge in different situations.

For the exercises to be effective, certain pedagogical requirements must be followed in its organization: exercises must be colorful and regular, individual characteristics of students must be taken into account, and the difficulty of exercises must be gradually increased; students should be involved in self-control and allowed to work on their mistakes. In this case, the students understand the cause of their mistakes and try to eliminate it, which allows them to develop skills and habits quickly.

**10. The laboratory method** is based on students' experiment and independently conducted research. First of all, this method is applied when studying physics, chemistry, and biology. It promotes the conscious acquisition of knowledge, the formation of students' practical skills, and the development of independent observation and comprehension. Laboratory work is organized in both frontal and group work forms, and if the equipment is available, it is organized individually. Here, students are required to be more active and independent than in demonstrations. If students act as passive observers during demonstration, they become participants and performers of the research when the laboratory method is applied.

The laboratory method allows students to master the skills and habits of using the equipment, creates favorable conditions for the formation of important practical skills as

measurement, calculation.

The problem-based laboratory method (research method) is particularly distinguished by its effectiveness. Here the research hypothesis is put forward, its ways are determined, students choose the necessary material and devices themselves. Problem solving activates productive thinking, increases the number of perceived objects and events, and most importantly, forms a completely new approach to learning. Learning difficulties motivate students to work independently. The problematic approach puts students in the position of active researchers, requiring independent solutions of many large and small tasks.

The laboratory method is complex, and it requires special, sometimes valuable equipment, comprehensive training of teachers and students, a lot of expenditure, energy, and time. Therefore, when planning a laboratory method, the teacher must ensure that the benefits of the independent research work outweigh the benefits of the traditional methods.

**11. The practical method** differs from the laboratory method in that students apply the knowledge they have acquired in their activities to solve practical problems. The practical method performs the function of deepening knowledge and skills.

This method also helps to solve control and correction tasks and stimulates students' cognitive activity.

In practical classes, students' cognitive activity usually goes through four stages:

- 1) teacher's explanation;
- 2) to show the task and give instructions about its realization;
- 3) to perform work;
- 4) to control.

The practical method accustoms students to perform tasks more responsibly than others, develops the qualities of students on economy and thrift, and so on.

**12. Programmed learning methods** aim to increase the effectiveness of the learning process management. These methods involve a significant increase in the volume of independent work, which students perform individually under the supervision of special tools.

New and traditional ideas are adapted in programmed teaching methods. The methods used in programmed teaching can be distinguished as follows:

- 1) methods of presenting information;
- 2) methods of performing programmed tasks;
- 3) methods of control and correction.

In programmed training, the presentation of information can be organized without a machine and with the use of a machine. When it's organized without a machine, teaching materials are provided in programmed textbooks. When programmed training is performed using the machine, it is brought to the display screens. There are three main systems of teaching programming: **linear**, **branched** and **mixed** (combined). The material is divided into small portions (doses) in a linear program. These portions (doses) are submitted sequentially for study. In the branched program, additional explanations are given, if students make a mistake or find it difficult to answer questions. A mixed program consists of a combination of linear and branched systems.

In programmed training, the performance of tasks and activities is organized in a unique way. Tasks and assignments can be arranged without a machine or with a machine. Such kind of tasks are essential after mastering each part of the training material. They have three goals: training, feedback, and control. Proper implementation of

those goals allows the student to make further progress in learning. The results of performing the training tasks are controlled. This control can be done both without a machine and with the help of machines. The most common method of organizing control in programmed learning is to choose the correct answer from several answers. Tablets and punched cards are used to form the assessment during without machine control, computers and various technical means are used during machine control.

A characteristic feature of programmed teaching methods is that all these methods are inextricably linked in a single educational-pedagogical effect.

**13. The situational method** is a method created from many ways and rules.

This method is applied by the pedagogue when none of the known methods allows to achieve the intended goals quickly and effectively in a specific situation. This method is also called a creative, non-standard method, but not all pedagogues accept this method. The situation plays a key role in selecting and applying this method. The method allows to make non-standard decisions, using non-traditional ways. A pedagogue must be able to anticipate the possible consequences. Usually, the situational method combines different traditional and new ways, the latest ideas.

The structure and content of this method vary from situation to situation.

The situational method is the teacher's independent work, creative, specific approach to teaching. This is based on the teacher's experience of seeing, understanding and comprehending the pedagogical process.

**14. The method of working on the book** is one of the crucial methods of teaching. The main advantage of this

method is that it allows the student to read and work on the material several times and at a time convenient for the student. Textbooks successfully perform all functions: educational, developing, educating, stimulating, control-correction ones.

The purpose of independent work on the book can be different: acquaintance with the structure of the book, doing review, reading some chapters, looking for answers to specific questions, studying the material, writing an abstract from some parts of the text or the whole book, solving and doing mathematical problems, performing control texts, and finally learn and memorize the material.

Two types of work on the book are widespread: work on the book in the classroom under the guidance of a teacher; independent work on books at home to strengthen and expand the knowledge acquired in the classroom. If the work with the book is carried out in the classroom, then the study of the material on the book is divided into several parts and their implementation is monitored. After reading a piece of text, students continue under the teacher's direction and perform the necessary operations: understand, remember, compare, and so on. When schoolchildren start working on the text at home, they should memorize the knowledge gained in class. Because the synthesis of the textbook's text with the educational material mastered in the lesson is an important condition for rational work with the book.

There are also shortcomings in the method of working on the book. This method takes a lot of time and energy. Therefore, it is considered a less economical method. In addition, it does not take into account the age characteristics of students. A poorly designed book does not have enough material to exercise self-control and manage the educational process. As a result, the teacher must choose good books and

apply this method in interrelation with other teaching methods.

**Check yourself.**

**1. Define the incorrect answer.**

- A) Teaching method is a regulated activity of teachers and students to achieve a certain goal in teaching.
  - B) Teaching methods are understood as ways to achieve goals and solve educational tasks.
  - C) In the structure of teaching methods, techniques (styles) also differ.
  - D) The purpose, content, and forms of work can be determined without considering the methods's practical feasibility.
  - E) The purpose, content, objective laws, principles, and forms of teaching are reflected in the teaching methods.
- A)   B)   C)   D)   E)

**2. Traditional classification of teaching methods takes its origins from the sources as ...**

- A) ancient philosophical and pedagogical systems; video, with new computer systems.
  - B) practice, use of visual aids, word; books.
  - C) All are true.
  - D) video, with new computer systems.
  - E) ancient philosophical and pedagogical systems.
- A)   B)   C)   D)   E)

**3. Match the methods to their classifications.**

1. *Classification of methods according to the teaching tasks to be performed.*

2. *Classification of teaching methods according to sources of knowledge.*

3. *Classification of methods according to cognitive activity type (nature).*

a) verbal methods, visual methods (techniques), practical methods.

b) to acquire knowledge, form knowledge and habits, apply knowledge, creative activity, strengthening, verification and assessment of knowledge, skills, and habits.

c) explanatory-illustrative (information-receptive), reproductive, problematic comments, partial search (heuristic), research.

**A) 1b; 2a; 3c**

**B) 1c; 2b; 3a**

**C) 1b; 2c; 3a**

**D) 1c; 2a; 3b**

**E) 1a; 2b; 3c**

**4. Match the groups of methods to their classifications.**

1. *Classification of methods according to training purposes.*

2. *Classification of methods according to the function of educational-cognitive activity.*

3. *Classification of methods according to common features.*

a) teaching methods and learning methods.

b) methods of organizing and implementing educational and cognitive activity; methods that stimulate and motivate educational and cognitive activity; methods of control and self-control over the effectiveness of educational and cognitive activity

c) methods that help the students assimilate the educational material; methods that help the students strengthen and improve the acquired knowledge.

**A) 1b; 2a; 3c**

**B) 1c; 2b; 3a**

**C) 1b; 2c; 3a**

**D) 1c; 2a; 3b**

**E) 1a; 2b; 3c**

**5. Define the correct line of the types of illustrations.**

A) naturally the thing itself, model of the thing, picture of the object and event, schematic materials (tables, diagrams, schemes), symbolic visual aids (map, globe), etc.

B) a picture of the object and event, symbolic visual aids (map, globe), etc.

C) model of the thing, schematic materials (tables, diagrams, schemes).

D) symbolic visual aids (map, globe), etc. model of the thing.

E) naturally the thing itself, symbolic visual aids (map, globe), etc.

**A) B) C) D) E)**

**6. Match the methods to their definitions.**

1. *Narration ...*

2. *Explanation ...*

3. *Illustration ...*

4. *Interview ...*

5. *Demonstration ...*

a) explains the rule, objective laws, tasks, assignments with evidence and proof.

b) involves the assimilation of educational material with the help of visual aids.

c) is one of the oldest didactic methods. Socrates used this method very skillfully in his time.

d) is a teacher's vivid, figurative narration of a certain event, a monological expression of educational material.

e) is the demonstration of an object or event in the dynamics, in the state of change and development.

**A) 1b; 2c; 3a; 4e; 5d**

**B) 1c; 2b; 3d; 4a; 5e**

**E) 1a; 2d; 3c; 4e; 5b**

**C) 1e; 2d; 3a; 4e; 5c**

**D) 1d; 2a; 3b; 4c; 5e**

## 7. Match the methods to their definitions.

1. Exercises ...

2. Laboratory method ...

3. Practical method ...

4. Situational method ...

5. Working on the book ...

a) students apply the knowledge they have acquired in their activities to solve practical problems. It performs the function of deepening knowledge and skills.

b) is a method created from many ways and rules and applied by the pedagogue when none of the known methods allows to achieve the intended goals quickly and effectively in a specific situation.

c) it allows the students to read and work on the material several times and at a time convenient for them.

d) are of particular importance in transforming the knowledge gained by students into skills and habits in the learning process. e) is based on students' experiment and research independently conducted by them.

A) 1b; 2c; 3a; 4e; 5d      B) 1c; 2b; 3d; 4a; 5e

C) 1e; 2d; 3a; 4c; 5b      D) 1d; 2a; 3b; 4c; 5e

E) 1d; 2e; 3a; 4b; 5c

### List of recommended literature

#### Chapter XII

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

2. Methods of Training. <https://www.iedunote.com/methods-of-training>

3. Top 10 Types of Employee Training Methods. <https://www.edgepointlearning.com/blog/top-10-types-of-employee-training/>

4. 7 Types of Training Methods (and How to Choose). <https://elmllearning.com/blog/training-methods/>

5. Active Learning. <https://www.teaching.cornell.edu/teaching-resources/active-collaborative-learning/active-learning#:~:text=Active%20learning%20methods%20ask%20students,words%20through%20writing%20and%20discussion.>

6. Active Learning Techniques to Try. <https://www.learninginnovation.duke.edu/resources/art-and-science-of-teaching/active-learning-techniques-classroom/>

## CHAPTER XIII

### TYPES AND FORMS OF ORGANIZATION OF THE TRAINING PROCESS

#### *13.1. Types of training process*

In a modern school, three types of training are used, which are relatively isolated from each other and differ in some features:

- **explanatory-illustrative training** (it is also called the traditional type of training);
- **problem-based training;**
- **programmed training and computer or computerized training based on it.**

Pedagogues try to find the perfect type of training. There is already an ideal type of training that combines the advantages of all didactic systems. Explanatory-illustrative training, problem-programmed training, problem-computerized training, etc., are formed this way.

The advantages and disadvantages of modern types of training are measured by a number of important criteria.

Listening and memorizing is the leading activity of students, and speaking on the studied material correctly is the main requirement and the main criterion of effectiveness in this type of training. The method of explanation is applied in the form of **explanatory-illustrative training** by using visual aids. Such training is also called **traditional training**. This name was given not only to distinguish it from more modern types of training, but also to emphasize that it has lived for many years in various modifications. Thanks to the organic

combination of new ways of transferring knowledge and new types of visualization, this ancient form of teaching has not lost its significance in the modern school.

Explanatory-illustrative training has a number of advantages. It helps to save time, maintain the strength of the teacher and students, makes it easier for students to understand complex knowledge, provides effective management of the pedagogical process. Along with these advantages, there are also disadvantages of the explanatory-illustrative type of training. The most noticeable of them is the provision of ready-made knowledge to students, the release of students from the need to think when acquiring knowledge, the lack of opportunities for individualization and differentiation of the teaching process.

**Problem-based training.** Training is organized in a way that in the process of solving educational problems, knowledge is acquired independently, students' creative thinking and cognitive activity develops. Problem-based training does not differ with its specific variability, because the involvement of students in cognitive activity is based on a number of stages. These stages must be carried out consistently and comprehensively. An essential stage of problem-based training is the stage of creating a problematic situation. In this situation, students have difficulty with thinking. When creating a problematic situation, the teaching task should be quite difficult, but it must be appropriate to the strength of the students. The first stage ends with setting a training problem and understanding it. In the second stage of problem-solving (closed stage), the student chooses the knowledge on the issue, but realizes that this knowledge is not enough to find the answer to the problem and begins to acquire new information. In the third stage (open stage), the

necessary knowledge is acquired in various ways to solve the problem. Then come the steps of solving the problem: verifying the obtained results, systematizing and generalization of acquired knowledge and skills.

Problem-based training has the following advantages:

1. Knowledge is acquired independently through personal creative activity.
2. There is a high interest in training labor.
3. Productive thinking develops.
4. The knowledge and skills acquired from training are strong and useful.

The disadvantages of problem-based training are:

1. Students' cognitive activity is poorly managed.
2. Much time is spent to achieve the intended (projected) goal.

**Programmed training.** The word is derived from the term '**software**' of computer technology. The term '**program**' is a system of sequential operations. Implementation of these operations leads to a pre-planned (backward design) result. The main purpose of programmed training is to improve the management of the learning process. Programmed learning, based on new didactic, psychological and cybernetic ideas in the early 1960s focused its efforts on creating new technology for the teaching process. This technology was supposed to control every step of the student's understanding of the material. It had to help the students in time to free them from many difficulties and other negative aspects of the poorly managed process.

**Computer training.** The discovery of the objective laws of human learning by the world didactics and the progress made in the development of personal computers (PCs) led teachers to become acquainted with new computer (computerized) training technology. This should play an

important role in the reconstructing the training and the educational process. Since computers are equipped with special training programs, they can be adapted to solve almost all didactic tasks. In developed countries, computers have been used in training for many years. The main directions of effective use of computers in these countries are defined as follows:

- 1) to increase mastery of certain subjects (mathematics, native language, foreign languages, geography, etc.);
- 2) to develop general cognitive abilities, solve tasks, think independently, and acquire communication skills (skills of collecting, analyzing and compiling information).

In addition, computers are widely used in automatized testing, evaluation, and management.

This helps the teacher save time and increase the efficiency of the pedagogical process.

Programmed learning and its substitute computer training are based on algorithms. An algorithm is a series of operations performed to obtain the correct result. It is used to show students the content and sequence of learning activities necessary to fully acquire knowledge and skills. The effectiveness of educational programs and computer training depends entirely on the quality of the algorithms that control intellectual activity. Poorly designed algorithms drastically reduce the quality of computer-assisted learning.

The quality of computer-assisted learning depends on two main factors:

- 1) the quality of educational programs;
- 2) the quality of computer technology.

Currently, there are many problems in both areas. There are still few effective, well-designed training programs that take into account the regularities of the cognitive (learning)

process. Their compilation requires a lot of time and effort from specialists. Therefore, such programs are costly programs.

### ***13.2. Forms of organization of the training process***

Forms of organization of training are the external expression of the joint activities of teachers and students in a particular order and mode. Forms of organization of training have emerged and improved due to social reasons and the development of didactic systems. They are classified according to various criteria: *according to the number of students; according to the place of learning (studying); according to the duration of training sessions, etc.* The *first criterion*, the forms of organization of training are a mass, collective, group, small group and individual forms. According to *the location*, school and out-of-school forms of education are distinguished. Forms of school training include school classes (lessons), work in a workshop, in the area of school practice and laboratory, etc. Extracurricular or out-of-school forms of activities include independent work at home, excursions, etc. According to the duration of training, the following forms are distinguished: classical lessons (45 minutes), double lessons (90 minutes), shortened double lessons (70 minutes), as well as lessons without breaks (lessons held at any time and duration).

Different training systems are known in the history of school development. At different times, *individual-group* (in medieval schools), *reciprocal* (Bell-Lancaster system in England), *differentiated learning system according to students' abilities* (Mannheim - a city in Germany, the author of the system is J.Sickinger), *laboratory-brigade training form* and *class-lesson system* were preferred. The Trump Plan

form of training (author is professor L.Trump) has been used in America in recent years. According to the Trump Plan, students spend 40 percent of their time in large groups (100-150 people), 20 percent in small groups (10-15 people), and 40 percent on independent work.

The classroom system, which emerged in the 17th century and developed for more than three centuries, is widespread. Its outlines were drawn by the German pedagogue I.Sturm, and the theoretical bases and practical technology of the system were developed by Y.A.Comenius.

The class-lesson form of training has the following features:

- 1) a stable composition of students of approximately the same age and level of training;
- 2) the work of each class according to its annual plan (planning of teaching);
- 3) implementation of the educational process as interconnected and sequential ones;
- 4) dedication of each lesson to only one subject;
- 5) replacement of classes according to the schedule;
- 6) conducting the lesson under the guidance of the teacher;
- 7) application of different types and forms of cognitive activity of students in the lesson.

The form of organization of training comparatively has some advantages over other forms, especially the individual form. First of all, it is distinguished by a serious organizational structure. This form is also convenient in terms of saving time. Thus, a teacher works with a large group of students at the same time, and mutual learning creates favorable conditions for collective action, competition, learning, and development of students.

However, this form has its drawbacks too. They reduce the effectiveness of the lesson. The most important shortcomings are that the lesson is based on the 'average' student, and there is no opportunity to carry out individual educational work with students.

The class-lesson form is the main form of organization of training. In addition, other forms are used in the modern school. These forms are called differently: auxiliary, extracurricular, home, independent work forms and so on. They include counseling, extracurricular activities, instruction, conferences, study group work and optional classes, club work, extracurricular reading, independent work of students at home, etc.

**Lesson** is an exhaustive part of the teaching process regarding meaning, time and organization. The main component of the class-lesson system of the organization of training is the lesson. Although the lesson is held in a short period of time, it is a complex and responsible stage of the teaching process. As a result, the overall quality of students' school preparedness depends on the quality of individual lessons. Therefore, pedagogical theorists and practitioners strive to create and apply technologies that allow students to solve learning tasks effectively and quickly.

Teaching well is not an easy task, even for experienced teachers. Much depends on knowing the requirements of the lesson and fulfilling them. These requirements are determined by the social order, the personal needs of students, the goals and objectives of training, the objective laws and principles of the educational process.

A modern lesson must meet the following general requirements:

1) to build lessons on the basis of the objective laws of the teaching and educational process using the latest

achievements of science and advanced pedagogical practice;

2) to implement all didactic principles and rules in the lesson in the optimal ratio;

3) to provide necessary conditions for their productive cognitive activity, taking into account the interests, tendencies and needs of students;

4) to ensure interdisciplinary communication;

5) to connect with previously learned knowledge and skills, to refer to the level of development achieved by students;

6) to motivate and activate the development of all spheres of personality;

7) to ensure the consistency and emotionality of all stages of educational activities;

8) to establish a connection with life, production activities, personal experience of students;

9) to use pedagogical means effectively;

10) to form the knowledge, skills, habits, thinking and activity techniques that are practically necessary;

11) Carefully diagnose, forecast, design and plan each lesson.

The lesson effectiveness formula combines two components:

1) seriously prepare for the lesson;

2) masterly conduct the lesson.

Poorly planned, ill-thought-out, hastily designed lessons that do not meet the needs of students cannot be of good quality. To prepare for a lesson means organizing the educational process so that it provides the highest end result in specific conditions.

Teacher's preparation for the lesson is divided into three stages:

1. Diagnostics;
2. Prognostication;
3. Designing (planning).

It is very important for a teacher to know the subject and factual material well in order to prepare a lesson successfully.

It is necessary to choose the optimal scheme of the lesson. This scheme is based on the algorithm of lesson preparation. Its step-by-step implementation ensures that important factors and conditions are taken into account, as the effectiveness of the training depends on those factors and conditions.

The implementation of the algorithm begins with the diagnosis of a specific situation. Diagnosis is to clarify all the conditions associated with the course. These include students' abilities, motives for action and behavior, needs and tendencies, interests and abilities, levels of learning (studying), the nature of the teaching material, its characteristics and practical value, the structure of the lesson, etc. This step ends with drawing up a diagnostic map of the lesson.

Prognostication is aimed at evaluating various options for the future lesson. Modern prognostication technology allows revealing quantitative indicators of the effectiveness of the lesson. This happens the following way: the lesson's purpose is to form knowledge, skills and habits. Their volume should be 100 percent. Naturally, the influence of factors that prevent this, reduces this ideal indicator. If the teacher is satisfied with the indicator, he or she begins to prepare the final stage of the lesson – planning. If the teacher does not like the indicator, he or she looks for a more perfect scheme.

Designing (planning) is the final stage of lesson preparation. The stage ends with creating a program to manage students' cognitive activity. The management program is a short and specific document of arbitrary design.

In this document, the pedagogue notes the important moments of the management of the process (who and when to ask, when to raise the problem, how to move on to the next stage of the lesson, if there are difficulties, how to restructure the teaching process, etc.). The lesson management program differs from the traditional lesson plan in the accuracy and specificity of the management effects.

Each lesson serves three purposes: to teach, bring up, and develop. Taking this into account, the lessons' *educational*, *upbringing* and *developmental* requirements are given to the lesson.

In addition to the requirements listed above, there are other requirements for the lesson. These include organizational, psychological, managerial, hygienic, and ethical requirements.

### ***13.3. Types and structure of the lesson***

There are many types of lessons, and it is necessary to classify the types of lessons in order to identify the feature that is common to all of them. This is a very complicated problem. As each lesson has its own goals and objectives, as the same material is not taught and different technologies and methods are applied, it is difficult to group the lessons to determine the common feature.

That is why experts approach to the classification of lessons from different points of view. When teaching sessions are divided into different types, the characteristics of the lessons are taken as a basis. Currently, there are dozens of known classifications.

One of the classifications belongs to the Russian didact I.N.Kazantsev. He suggested grouping the lessons according

to two criteria: the content and the rules (method) of holding. For example, according to the first criterion, i.e., the content, mathematics lessons are divided to arithmetic, algebra, geometry, and trigonometry classes. According to the rules (method) of holding, lessons are divided into excursion classes, movie classes, independent work classes and other lessons.

The following types of lessons are distinguished in accordance with the logic of the content and the nature of students' cognitive activity:

- 1) introductory lesson;
- 2) a lesson of initial acquaintance with educational material;
- 3) a lesson for the acquisition of knowledge;
- 4) a lesson for application of knowledge in practice;
- 5) a lesson that forms habits;
- 6) a lesson for consolidation, repetition, and generalization of knowledge;
- 7) control lesson;
- 8) mixed or combined lesson.

The following types of lessons are included in the classification, which are prevalent among theorists and practitioners, and is distinguished by two important features – the didactic purposes of the lesson and the place of the lesson in the general system:

- 1) combined or mixed lessons;
- 2) a lesson to familiarize students with new material;
- 3) a lesson for consolidating knowledge;
- 4) a lesson aimed at generalizing and systematizing the studied material;
- 5) a lesson, the primary purpose of which is to establish and strengthen skills and habits;
- 6) a lesson aimed at checking and assessing knowledge.

It should be noted that in the types of lessons 4, 5, 6 other goals can be pursued in addition to the main goal.

The types of lessons which are clarified and most commonly used at present are:

- combined (mixed) lesson;
- a lesson for assimilation of new knowledge;
- a lesson for the formation of new skills;
- a lesson for generalization and systematization of the studied material;
- a lesson for controlling of knowledge, skills, and correction;
- a lesson for practical application of knowledge and skills.

The lesson's structure means its internal structure, the sequence of its separate stages. The type of lesson is determined by the availability of structural parts and their sequence. The teacher is free to choose the structure of the lesson. However, this chosen structure should ensure high results of education. It is not difficult to understand the importance of this innovation. Because in the past, there were strict requirements to follow the formal stages of the lesson. But the attitude of theorists and practitioners to the 'unstructured' lesson is ambiguous. Giving freedom to the teacher is undoubtedly a progressive step. However, in an 'unstructured' teaching environment, violation of the objective laws of students' cognitive activity is a serious drawback. It is proposed to evaluate the types of lessons and the appropriateness of their structure in terms of the effectiveness of the educational process (result).

*The four-stage classical lesson* structure originates from J.A.Comenius and J.F.Herbart. According to this classic structure, the lesson is divided into four formal stages:

- 1) preparation to acquire new knowledge;
- 2) acquisition of new knowledge and skills;
- 3) strengthening and systematization of knowledge and skills;
- 4) application of knowledge and skills in practice.

The type of lesson that corresponds to this structure is the type of combined lesson. It is not difficult to understand why this type of lesson is called a combined lesson. In this lesson, the teacher has the opportunity to achieve several goals. The elements (stages) of the lesson can be combined in any sequence. This makes the lesson flexible and can be applied to a wide range of educational tasks. This explains the widespread application of the combined lesson in practice. According to some data, the share of combined lessons among all classes is 75-80 percent.

The vitality of the classical combined lesson is also related to the fact that this type of lesson, in comparison with other types of lessons, is consistent with the regularities of the learning and educational process, the dynamics of students' mental capacity. And this gives teachers great opportunities to adapt to specific conditions. The duration of the combined lesson for primary school is slightly shortened, considering the amount of voluntary attention of students. The expediency of our predecessors intuitively setting the duration of the lesson at 45 minutes is confirmed today by psychophysiological research. If the lessons are short, the time for productive activity is reduced. In long-term lessons, however, the need to regulate voluntary attention of the students increases.

Along with the advantages of a combined lesson, it has disadvantages, too. There is not enough time in this lesson not only to acquire new knowledge, but also for other types of cognitive activity. Since the arrival of the combined

lesson, radical changes have taken place: the amount of knowledge to be taught in the lesson has increased significantly, classes in many schools have become more crowded, students' cognitive activity has become more difficult to manage, their attitude to learning has worsen. In order to increase the productivity of teaching sessions, new types of lessons have emerged and applied in practice. In these types of classes, students are more likely to engage in any work. For example, a lesson that teaches new knowledge, a lesson that forms new skills, and so on. These types of lessons are shortened combined lesson types. The structure of these types of lessons usually consists of three parts:

- 1) organization of work (1-3 minutes);
- 2) the main part (formation, acquisition, repetition, reinforcement, control, application, etc. (35-40 minutes);
- 3) completing the lesson and homework (2-3 minutes).

In modern times, the following structure of the lessons is preferred in our schools:

1. **Motivation, setting the problem.** According to the first mechanism of active teaching, the existence of a problem is the main step in the emergence of cognitive activity. It is necessary to bring up the problem by starting each research. The real problem always gives rise to many hypotheses and assumptions, and in order to check them, firstly, a research question must be formed. This research question that plays the role of a guiding star, a guide to the discovery of new information.

So, why this stage is called the lesson motivation? Motivation as a psychological factor is the driving force that activates the mechanism of any activity. In an active lesson, the problem and the need to solve it act as a motivation that motivates, i.e., stimulates the thinking process to work and

increases the cognitive activity of students.

2. **Conducting research.** As natural consequences of hypotheses on the solution of the problem, there is a need to find facts that confirm or disprove the hypotheses and help answer the research question. This should be facilitated by various activities, that purposefully lead students to the solution of the problem, containing new information and new questions. The right conditions are created for thinking, reflection and discovering new information just in the process of studying new facts and searching for answers to these questions. Research can be carried out in different forms of work: work with the whole class, in small groups, in pairs, and individual work. However, the notion of interactive learning itself includes more active forms of work than the frontal or individual forms used in traditional training. The interactive character of teaching is manifested in small groups work or pair work more distinctly.

3. **Exchange of information.** At this stage, participants exchange findings and new information obtained during the research. The need to answer the question motivates all participants to listen to each other's presentations actively. The presentation draws a circle of new knowledge, and so far, this knowledge is incomplete and chaotic. At this stage, a new need arises – the need to organize, systematize that knowledge, and find an answer to the research question to come to a certain conclusion.

4. **Discussion and systematization of information.** This is the most complex stage and requires the mobilization of all mental habits, different types of thinking (logical, critical, creative). The teacher helps to purposefully discuss and organize the facts obtained on the basis of facilitation (using guiding, auxiliary questions). The organization of information aims to reveal the connections between all the

facts and systematize them. As a result, the lines of answer to the existing research question begin to be clearly selected.

**5. Conclusion (generalization).** Thus, it remains for students to take the final step in discovering new information: to come to a concrete conclusion and to define the generalization. To do this, the student must summarize the information obtained, and independently compare the result with the research question (does this result answer that question?) and with the hypotheses (is there correlation between variables?). This is a very important point. The culmination of the lesson is the unique feeling of joy and satisfaction that the students feel, because they have discovered the information themselves.

**6. Productive application.** As it is known, the main criterion for the acquisition of knowledge is its productive or creative application. Creative application strengthens knowledge, reveals its practical significance to the student. Therefore, if possible, the teacher may suggest the students to try to apply the acquired knowledge to solve certain problems or find answers to some new questions. If creative application is not possible immediately, and it is necessary to go through the path of knowledge acquisition to the end, then it is necessary to go this way. But in the end, it is better to allow students to work creatively on the information they discover. In this case, this information will forever be engraved in their minds. This stage may not be limited to one academic lesson in a time, i.e., its implementation is possible in subsequent lessons.

**7. Assessment or reflection.** Assessment is a mechanism that ensures the improvement of any process. In order to improve, it is important to identify shortcomings and achievements on time, to determine what hinders and

contributes to success. The processes of assessment and reflection of students' learning activities should serve this purpose.

As mentioned above, one of the important features of active learning is learning independently and acquiring skills for independent development. At the end of the lesson, it would be helpful to review one of these procedures – assessment or reflection – to review independent learning processes and, as a result, to improve the student's learning activities.

Sometimes assessment and reflection can be included in different stages of a lesson, which helps the learning process to be more successful.

#### ***13.4. Non-standard lessons***

In the middle of 1970s, if there was a decline in students' interest in teaching sessions, teachers would try various ways to prevent students from turning their backs on their studies. The aim was to arise and maintain students' interest in educational work. Mass practice focused on this problem and organized non-standard lessons. Non-standard lessons are improvised lessons without a standard structure. Pedagogues have different opinions about non-standard lessons.

Some of them see non-standard lessons as a step towards developing pedagogical thought and the democratization of the school. Others see non-standard lessons as a violation of pedagogical principles and consider it as the result of teachers' forced retreat under the pressure of lazy students who do not want to study or fail in learning.

Dozens of non-standard types of lessons are used in the pedagogical activity. Even their names give an idea of the goals, objectives, and methods of conducting such lessons.

The most common non-standard lesson types are:

- 1) lessons - business games;
- 2) lessons - press conference;
- 3) lesson-competition;
- 4) consultation sessions;
- 5) computer classes;
- 6) mutual training classes;
- 7) creative classes;
- 8) credit classes;
- 9) fantasy classes;
- 10) dialogue lessons;
- 11) lessons - role-playing games;
- 12) lessons - excursions;

In general, the new pedagogical literature indicates up to 36 non-standard types of lessons.

As can be seen, the list of non-standard lessons includes some types of classes, which in previous classifications were considered as auxiliary, extracurricular forms of training.

Of course, non-standard lessons are unusual in terms of their purpose, organization, methodology, students mostly like them than daily lessons with a strict structure, a certain mode of work. Therefore, teachers should use such non-standard lessons. But non-standard classes should not be made the main form of work. It is not advisable to apply them systematically as they take a lot of time, not to require serious mental work, and achieve high results.

### ***13.5. Auxiliary forms of organization of the training process***

Various classes are auxiliary forms of organization of educational work. They complete and develop students' performance in a classroom setting. Auxiliary forms include:

**study groups, workshops, seminars, conferences, consultations, optional classes, educational excursions, independent work of students,** etc. These forms are conditionally called auxiliary forms. Some of them are non-standard classes and are trying to get the main form of training. At present, there are various types of educational institutions that work in this direction. In this regard, some forms, such as seminars, independent work at home, optional classes, excursions might be the main form of training for a certain period of time.

Independent work of students at home is one of the main and stable extracurricular activities. This type of work is an integral part of the learning process. Its main purpose is to expand and deepen the knowledge and skills acquired by students in the classroom, prevent forgetting, and develop their individual inclinations, talents and abilities. Independent homework is built taking into account the requirements of the curriculum, as well as the interests and needs of students, their level of development. Extracurricular independent work refers to students' independence, awareness, activity and initiative. Properly organized extracurricular activities are no less important in the development of students than active work in the classroom.

Students' independent work at home performs the following learning functions:

- 1) to strengthen the knowledge and skills acquired in the lesson;
- 2) to expand and deepen the teaching material taught in the classroom;
- 3) to develop skills and habits to perform work independently;
- 4) to develop the independence of thinking by performing individual tasks within the program material;

5) to conduct individual observations and experiments, collect materials to study new topics in the classroom and prepare teaching aids (based of samples from nature, pictures, illustrations, cuttings from newspapers and magazines and statistical materials).

**Check yourself.**

**1. The advantages of problem-based training are:**

- A) Knowledge is acquired independently through personal creative activity.
- B) Productive thinking develops.
- C) There is a high interest in training labour.
- D) The knowledge and skills acquired as from training are strong and useful.
- E) All are true

**A) B) C) D) E)**

**2. Define the criteria of classification of the forms of training organization:**

- A) according to the number of students;
- B) according to the place of learning;
- C) according to the duration of training sessions.
- D) according to the number of students; the place of learning; the duration of training sessions.
- E) according to the duration of training sessions; the place of learning.

**A) B) C) D) E)**

**3. Match the forms of organization of training to their duration:**

- 1. *classical lessons*
- 2. *double lessons*

3. *shortened double lessons*

4. *Lessons without breaks*

a) 90 minutes

b) 45 minutes

c) lessons held at any time and duration

d) 70 minutes

A) 1b; 2a; 3d; 4c    B) 1c; 2b; 3a; 4d    C) 1b; 2c; 3d; 4a

D) 1c; 2a; 3d; 4b    E) 1a; 2d; 3b; 4c

**4. Define the features of the class-lesson form of training:**

A) a stable composition of students of approximately at the same age and level of training; work of each class according to its annual plan (planning of teaching);

B) all are true;

C) replacement of classes according to the schedule; dedication of each lesson to only one subject.

D) implementation of the educational process as interconnected, and sequential;

E) conducting the lesson under the guidance of the teacher; application of different types and forms of cognitive activity of students in the lesson.

A)    B)    C)    D)    E)

**5. Define the sequence of stages of a modern lesson.**

1) exchange of information

2) motivation, setting the problem

3) conducting research

4) discussion and systematization of information

5) productive application

6) assessment or reflection

7) conclusion (generalization)

A) 1, 2, 5, 7, 4, 3, 6

B) 5, 6, 4, 7, 1, 3, 2

- C) 3, 4, 2, 7, 6, 1, 5
- D) 4, 1, 5, 7, 6, 2, 3
- E) 2, 3, 1, 4, 7, 5, 6
- A) B) C) D) E)**

**6. Choose the types of lessons which are most commonly used at present:**

- 1) combined (mixed) lesson
- 2) lessons - business games
- 3) a lesson for assimilation of new knowledge
- 4) lessons - press conference
- 5) a lesson for the formation of new skills
- 6) a lesson for generalization and systematization of the studied material
- 7) lesson-competition
- 8) a lesson for control of knowledge, skills and correction
- 9) computer classes
- 10) a lesson for practical application of knowledge and skills
- A) 1, 2, 3, 6, 7, 9
- B) 3, 4, 5, 6, 7, 8
- C) 1, 3, 5, 6, 8, 10
- D) 2, 4, 5, 7, 8, 10
- E) 4, 5, 6, 7, 8, 9
- A) B) C) D) E)**

**List of recommended literature**  
**Chapter XIII**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>
2. Types of Training. <https://open.lib.umn.edu/humanresourcemanagement/chapter/8-2-types-of-training-2/>
3. Top 10 Types of Employee Training Methods. <https://www.edgepointlearning.com/blog/top-10-types-of-employee-training/>
4. 8 popular types of employee training programs. <https://www.easy-lms.com/knowledge-center/employee-training-center/8-popular-types-of-employee-training-programs/item12853>
5. Lesson Planning. <https://www.twinkl.com/teaching-wiki/lesson-planning>
6. First Things First: Setting the Stage for Active Learning. <https://www.teaching.berkeley.edu/news/first-things-first-setting-stage-active-learning>

## CHAPTER XIV

### NEW TECHNOLOGIES OF THE TRAINING PROCESS

#### *14.1. Notion about new technologies of the training process*

Pedagogical technology is a new approach to the training process. According to this view, unlike traditional training, the training process should be a maximum guided process. The history of training technology began in the second half of the 20th century with the emergence of technical devices for testing knowledge. For a time, training technology was understood as using technical tools in training. Scientists believe that the use of technology is helpful in providing more information. However, the use of technology at different stages of the teaching process is actively developing. Scientists predict that training systems will be used independently in the future without the help of teachers and schools.

At the beginning of the 50s in the XX century, the search of scientists took a different direction, and as a result, the notion of **training technology** entered the scientific circulation. Programmed training, then computer science, cybernetics, and a systematic approach became the basis for understanding the training process as a technology.

In the traditional approach, the teacher sets goals to teach the theorem, analyzes the poem, solves quadratic equations, etc. These goals do not describe the student's activity. According to technology, the goal of training is to change the student's position, knowledge, thoughts, feelings and

behavior. The task of technology is to study all the elements of the training system and design the training process.

#### ***14.2. Structural and functional components of new technology of the training process***

In the practical sense, **pedagogical technology is also a set of operations to form and control knowledge, skills, habits, and attitudes** in accordance with the goal that is set.

In pedagogical technology, the following functional components of a teacher's activity can be distinguished:

- 1) gnostic (cognitive) component;**
- 2) design component;**
- 3) constructive component;**
- 4) organizational component;**
- 5) communicative component.**

Thus, teacher's training technologies consist of the following operations:

- 1) operations for accumulation (acquisition) of knowledge;
- 2) operations to design training and education-upbringing goals;
- 3) determining the structure of the training and educational process;
- 4) operations to organize the training and educational process;
- 5) operations to transfer knowledge to students.

The **gnostic component** includes: knowledge about training, educational goals, the content of the subject taught; to study students; to learn the principles and technologies of teaching; to hold training and lessons, etc.

The **designing component** includes long-term goals (prospects), operations, tools. Designing should be carried

out into life taking into account gender differences.

The **constructive component** involves a set of operations to prepare for the next session.

The **communicative component** includes a set of operations for verbal and non-verbal interaction with students.

The **organizational component** includes a set of operations to prepare and conduct sessions. The last two components (communicative and organizational components) have close relationships.

There are different classifications of technologies. Two of them – **pedagogical** and **psychological technologies** should be specially mentioned. In pedagogical technologies, operations and actions are felt physically. Psychological technologies are of hidden character: they are operations and actions that happen in the psyche of a particular person. However, it is very difficult to draw a clear line between pedagogical and psychological technologies.

Pedagogical technologies can be classified as follows:

- 1) technology of the training process;
- 2) technology of educational (upbringing) process;
- 3) development technology;
- 4) diagnostic technology.

**Training process technology** is a set of operations to build knowledge, skills and habits.

**The upbringing (educational) process technology** is a set of operations for the purposeful formation of relative, constant and regular relationships.

**Development technology** is closely related to training and education-upbringing technology. Psychological development means the formation of mental abilities, the proliferation of any operations in the human psyche.

Thus, where skills are formed, mental development is also observed there.

During physical development, physical skills manifest themselves as a result.

**Diagnostic technology** is the process by which pedagogues or psychologists diagnose a child's readiness for school.

### ***14.3. Creation and principles of application of new technologies in the training process***

Specific principles are the main provisions that guide the organization and application of pedagogical technologies. Various specific principles are given in the pedagogical literature. The most important principles are analyzed below:

**1. Principle of educative training.** The strategic goal of any pedagogical technology should be the formation of personality characteristics.

**2. Principle of developmental training.** When organizing pedagogical technologies, it is important to consider the educative efficiency and design and implement its developmental aspect. It is necessary to ensure the harmonious development of the student's emotional and intellectual sphere.

**3. Principle of achieving success.** Creating a situation for success motivates the student to achieve remarkable results. It is not necessary to work hard to study the student's past. When A.S.Makarenko admitted the child to the colony, he was in no hurry to study his past. He developed a technology that was effective for each student. It was creating the situations to achieve success.

**4. Principle of feedback with students.** One of the crucial tasks is to give all students the opportunity to report

on their success in each lesson. In other words, each student should be tested on important knowledge of the teaching material. This principle can be realized if the necessary conditions are created. First of all, homework must match the student's strengths. Other subjects should be considered when giving assignments. Unfortunately, there is no exact amount of homework at school. In this case, teachers act differently.

**5. Principle of revision.** It is necessary to revise it several times after getting acquainted with the teaching material for the first time. It is necessary to return to the material taught, after two or three lessons and revise it. This can raise the question: But where to get the time (we know that, it is often not included in the program)? The problem can be solved. If the main focus is on the main ideas, 'signals', then there will be a reserve of time. It is necessary to come back periodically to the material covered during the year and revise the main ideas.

**6. Principle of optimal mental stress** is necessary for both students and teachers. The student should not be overloaded or underloaded. The student does not develop under conditions of low mental stress. This requirement can also be predicable to teachers. If teachers want to do everything themselves in the classroom, it leads to the mental overload of teachers. Therefore, it would be good to give more authority to students. Many technologies allow them to be involved in managing the learning process.

**7. Principle of maximum participation of student in the training process** considers students' involvement in various classroom activities. A mutual survey is conducted for this purpose, and problems and shortages in the answers are eliminated.

The principle is that **the teacher should not do what students are capable of**. This principle allows the teacher to relieve the burden. Involving the student in actual activities not only develops but also upbrings the student. The educative and developmental goals of training are successfully achieved by creating a situation of success in real activities in the learning process.

**8. Principle of orientation to the zone of proximal development.** If a student is unable to complete the task, it should be reduced to the student's level of ability. If a student cannot correct a deficiency in written task, then he or she should not be reprimanded. This reprimand will not affect the student's development in any way. Even if it affects, it will manifest in a negative way (the student may develop a sense of revenge on those around him or her).

**9. Principle of unification for common purposes.** Working principles, goals, technologies should not be imposed on students. The technology of the training process should be a product of the joint efforts of teachers and students. In order to improve the teaching process, it is better to hold discussions, brainstorming ideas.

#### ***14.4. New technologies of the training process or interactive teaching methods***

Learning outcomes can be considered effective only then, if teaching methods can ensure the expansion of students' thinking, understanding, and active participation in the process of knowledge acquisition. Considering these requirements, the lesson should refer to optimal teaching methods which in themselves ensure independent acquisition of new knowledge and activation of productive and creative thinking. There are three types of training methods: 1)

traditional training; 2) active training; 3) interactive training. In the **traditional teaching method** (also called traditional teaching), the teacher is the main character and only dictates and teaches the students. In the traditional teaching process, the teacher is active, and the students are passive listeners. The teacher speaks, the students listen. There is no interaction in this learning process. The student is only an object in this process. The teacher communicates with students only through answering questions and written work.

**Active training method** is a method in which there is interaction, relationship, communication, teacher-student cooperation between teacher and student in the teaching process. Students are not passive listeners. They are active participants in the lesson, close assistants to the teacher. If the teacher was the main figure in passive teaching method, now the teacher and the student together are the main builders and organizers of the lesson. During the **interactive training**, the teacher's main task is to help students, coordinate the activities of the students in the learning process, encourage them to search creatively, and teach them to search and learn accordingly.

The position of the teacher – facilitator (guide, leader) is mostly the position of guide. The teacher systematically and purposefully organizes problem situations, creates conditions for students' research problems, and provides methodological assistance in solving them. Let's take a look at some of the modern teaching methods used in this process:

**1. Brainstorming.** This method is used within 5-10 minutes at the lesson as a means for students to come up with different ideas on how to solve the problem. Brainstorming plays an extremely useful role in forming the initial idea needed to create a problematic situation in the learning

process. Brainstorming allows students to discover their knowledge of a new topic quickly and interest in the topic under discussion. Applying this method activates students, avoke the desire to find a quick and correct answer to a question, and suggest different ideas. Brainstorming is applied by the teacher when the teacher announces the problem to be solved. The question is written on the board or asked orally. During brainstorming, it is also advisable to ask them to identify possible versions for completing any idea or expression on a new topic. The teacher should get as many students as possible to express their thoughts. Students quickly come up with various ideas and suggestions on the problem. All considerations and views are written on the board without any comments or criticism. Then comes the stage of analysis and discussion. Different ideas are evaluated, opinions are expressed for and against. Students choose ideas that they find useful to solve the problem under discussion.

**2. Presentation.** Presentation, which is one of the important elements of modern teaching methods, should be considered as an indicator of the student's research activity. This method allows students to present the research results in different ways, express their views accurately, and draw perfect conclusions. When a student prepares for a presentation, he or she develops communication skills and is able to share ideas working in groups. In this case, the presentation is accurate and attracts attention with its good design. Students preparing for the presentation learn the rules and forms of presentation. Teacher should instruct students on the type of presentation and its rules to conduct it. By following these guidelines, students are prepared to make the best use of their time and to express their thoughts clearly and concisely. The student is able to comment on the

presentation. The presentation is discussed and evaluated on the basis of a table of criteria. The presentation can be realised individually or in groups.

**3. KWL.** KWL is just one of many graphic organizers that students can use to boost their literacy skills. The KWL reading strategy is an instructional technique used to improve reading comprehension. It also improves a student's ability to remember the material. KWL is most often used with expository reading materials such as classroom textbooks, research articles, etc. The letters KWL form an acronym for "Know" (what we know), "Want to know" (what we want to know), "Learned" (what we have learned)."

KWL allows students to connect previous knowledge, experience with new knowledge, and think about a topic, a problem.

The teacher draws a table with three columns on the board and notes the questions in each column appropriately: "What do we know?", "What do we want to know?", "What have we learned?" In the KWL technique, readers are first asked to consider what they already know about the subject before reading the material. For example, they're reading a book in class about seasons. In the 'Know' column, they would write down the names of the seasons they are familiar with, such as spring, summer, autumn, and winter.

When students finish the 'Know' step, they move on to the 'Want to know' column. Here they write down what they hope to learn about the subject from the passage. Given, that seasons are the subject at hand, they could write that they hope to find out information on the year's seasons.

Third, students read the passage and then summarize what they learned from the reading passage. Perhaps they learned more about the seasons. They would write this down in the

‘Learned’ column.

Students can fill out KWL charts alone, but teachers often have students, who use the graphic organizer in pairs or small groups. The group notetaker can write down what each student knew about the topic, what they wanted to know, and what they learned.

Alternatively, students can fill out KWL sheets independently and discuss each step with the group.

Students are encouraged to share their results with others to increase understanding, active participation and interest improving overall comprehension and retention of the materials they have read.

KWL notes can be brief but must include enough details to be meaningful to the student in the future. The students can discuss what they have learned with their parents at home.

Example:

<b>Know</b>	<b>Want to know</b>	<b>Learned</b>
<b>Theme:</b> <i>Seasons of the year</i>		
What do we know about the seasons of the year?	What do we want to know about the seasons of the year?	What have we learned?"

**4. Auction.** The teacher identifies the topic and instructs students about the auction rules. The studied objects or events are named sequentially. Everyone takes turns expressing their thoughts on the object or event: after each idea the teacher counts: one, two, three. In this case, another participant can quickly make an offer. The last bidder is considered the winner. Ideas should not be repeated. In order to follow this rule, everyone listens to each other.

Example: In a math lesson, the teacher holds an auction on the “composition of the number 7” and asks the class the question, “How do you get the number 7 by the addition rule?”

Information for teachers.

Possible answers: 1)  $6 + 1 = 7$ ; 2)  $4 + 3 = 7$ ; 3)  $2 + 5 = 7$ ; 4)  $5 + 2 = 7$ ; 5)  $3 + 4 = 7$ ; 6)  $1 + 6 = 7$ ; 7)  $1 + 1 + 1 + 1 + 1 + 1 + 1 = 7$

The student who gives the last possible answer in the game wins the auction.

**5. Carousel.** Carousel (merry-go-round) is a cooperative learning strategy that involves movement, discussion, and reflection. In the carousel, students work in small groups and move from station to station, discussing each task as they go. Carousel is a great way to incorporate kinesthetic learning into teaching, and give students a much needed break from sitting in their chairs. It is also a great way to encourage group work, as students must discuss and reflect together to answer each question.

How can a teacher use the carousel in the classroom?

Carousel is a great cooperative learning activity for reinforcing knowledge and skills after learning. It can also be used at the beginning of a unit or lesson to activate prior knowledge. For example, if a teacher is teaching a unit on the Sound, the teacher might want to see what students already know about the Sound.

Generally, the teacher creates about 5-7 numbered stations around the classroom. Each station consists of chart paper with a question written on the top. The idea is to get students thinking about the subject matter that they are about to learn. For example, if the teacher is doing this as an activation strategy before the Sound unit, some questions might be asked: “What do you know about how sound is

made?” or “What are some different sounds that you hear every day?”

Students are divided into small groups. The number of students in each group may depend on the number of stations that the teacher has. It's better to limit groups participants to about 3-4 students.

Each group begins at a different station. The teacher sets a timer, and students stay at each station for that set period of time. It is advisable to limit this to about 1-2 minutes at each station. It is found that the rapid pace keeps students motivated. It is recommended not to give them enough time to put all of their thoughts down.

When students are at each station, they read the question, skim over any previous answers by other groups, and then add their ideas to the paper. When the timer goes off, they move to the next station.

When the groups have visited each station, there is a short discussion to obtain information. Teacher should try not to drag this out. With younger students, you may want to choose a couple of points to highlight and discuss from each paper, rather than reading everything written.

What does the teacher need to keep in mind before and during the carousel activity?

How many students will be in each group? Sometimes having many students can cause problems, as there is not enough time for each person to do. Three people would be enough in each small groups.

What is the teacher's purpose? Is it to reinforce or assess, activate prior knowledge? This will affect the types of questions that will be asked.

How will students know where to go next? Are the stations labeled? Do they travel in a predictable way around the classroom?

How much time do students need? If it is noticed that students are getting off-task, it probably means that too much time have been given them at each station.

How will the teacher decide who does the writing? Is there a designated student in each group? Will they carry the marker with them or the marker will be left at each station?

**6. Clustering.** The teacher draws a circle on the board or worksheet and asks the students to say words or phrases related to the notion written in the center. Starting with the notion written in the center, each subsequent word is connected by lines with the words related to it. It is recommended to write down as many ideas as possible and link them before the time runs out. After the time is up, the cluster is discussed and summarized.

As a strategy, clustering can facilitate sharing information and seek out links, connections or patterns between various facts and statements through discussion and analysis and consensus-seeking.

**7. Revealing the notion.** This game is held in the form of a puzzle and leads to high student activity. The teacher hangs an oval map on the board and writes the notion required by the students from behind. Shows students the hidden side of the map, lists or writes 2-3 keywords related to the hidden notion. In accordance with the characteristics, the students find a hidden notion. The teacher lists new features of the notion, if it difficult for the students to find it. After the students' suggestions are made, the teacher says whether an answer is found and opens the hidden notion written under the card.

**8. Discussion.** Discussion is the exchange of ideas, information, impressions, analysis, and suggestions around a topic. Its main task is to analyze the problem, find a solution

and create an opportunity to make the right decision. Discussion forms a culture of listening, presenting, asking questions, and developing students' logical and critical thinking and oral speech. During the discussion, students are reminded of the rules of discussion in advance. The subject is clearly stated. The teacher regulates the discussion by asking questions and reviewing the students' answers. This helps to develop the discussion process. In this case, it is not advisable to ask closed-ended questions with 'yes' or 'no' answers. Questions like "What happened?", "Why did it happen?", "Could it be in a different way and how?", "What would you do in this situation?", "How do you think that type of character felt?", "How would you feel in this situation?", "Was that right? and Why?" focused on the topic are asked in the discussion.

**9. Word associations.** The key word (or phrase) related to the topic to be studied is written on the board in this method. Students say the first thoughts they remember about the word, and those thoughts are written on the board by the teacher. Words related to the topic are selected and linked to the thoughts expressed by the students and a notion or idea is revealed on those bases. The students begin to study the new material on this base. This method can also be applied orally.

**10. Problematic situation.** This method develops critical thinking, analysis and generalizing skills. The teacher prepares the problem and questions for discussion in advance. Students are divided into groups of 4-5 people. Worksheets reflecting the problematic situation are handed out to the students. Each group discusses one of the suggested situations and shows of solution. After the groups have finished their work, a general discussion is held in the classroom.

**11. Questionnaires and interviews.** These methods are

used to study the public opinion of certain groups about the facts and events related to the research issue. A questionnaire is compiled on the research issue, and questions are asked here. Respondents fill out this form independently. But interviews are held orally. People who are interviewed, answer those questions.

**12. Decisions tree.** This method aims to study and analyze alternative ways of making decisions. The teacher explains the problem to be discussed and several versions of its solution are defined together with the students. In groups of 4-6 people, students analyze the advantages and disadvantages of the solution to the problem and mark them appropriately in front of the '+' or '-' sign. The final result is written in the decision part of the table and covered with a chart paper. After the presentation of all the groups, the teacher holds discussion to summarize the results.

**13. INSERT** (*Interactive Noting System for Effective Reading and Thinking*)

INSERT is an interactive noting system to develop effective reading and thinking. This is a method of using signs to find the correct answer by checking knowledge to understand the text. A teaching idea is designed to encourage students to become engaged readers by inserting different symbols into the text. This gives students an opportunity to reflect on what they know and make decisions about the different ideas presented in the text.

This strategy helps students interact and make connections with the text during reading. It helps to:

- establish a purpose for reading;
- conclude the information in the text
- practice note-taking strategies;
- enhance metacognition;

- improve reading comprehension using content area text

INSERT is a strategy that will help to monitor the student's thinking ability as reading. You should use the following symbols to code the text. Students mark certain passages, sentences or words in the margins when working with the text. The authors of the technique suggested to use the following symbols for this:

'v' – This information is already known to me, I knew that;

'+' – This information is new, I didn't know that!;

'-' – I had a different idea about it, I thought differently;

'?' – There is something unclear to me in this material, I don't understand this.

Before reading the new text, the teacher explains given text's rules. Afterwards, the teacher hands out the text, models how to use the symbols while reading, have students read the text once, and insert appropriate symbols into the text as they read.

Teachers who use INSERT in the classroom recommend putting A4 strips into textbooks not to stain the books.

After marking, students transfer their notes from the textbook to a special table appropriately:

v	+	-	?
Abstract notes of facts, terms and notions that are already familiar.	Everything new that became known from the text read.	Contradictions that appeared after reading	Incomprehensible words, facts requiring clarification

To consolidate the material, that are read by the student, only needs to transfer the notes to the table.

**14. Venn diagram.** This method is used to compare objects or events, to identify their similarities and differences. Using a Venn diagram is carried out in the following steps. The objects and events to be compared are identified. Crossing circles are drawn (there is a place for writing in the middle), objects to be compared are marked in the circles I and II. Students are given instruction (the teacher talks what will be compared and how similarities and differences will be noted in the circles). The compared objects are described: (differences are marked on the right and left, similarities are marked in the circle of intersection). As a result of the comparison, opinions are generalized.

**15. Project preparation.** Project preparation is the independent study of various topics. Students work on their projects for a long time before submitting them. Projects play an important role in the formation of students' research skills and skills for independent acquisition of knowledge, help them independently create their own action programs, and to plan their time and work on the schedule. This method also allows students to interact with each other and with different people outside the school. It allows a deeper understanding of any aspect of events and directs the use of additional literature.

When preparing projects, the teacher identifies the topic or problem and allows the class to choose one of them. The class can also select the problem using the 'brainstorming' method. The problem must be concrete. Together, the teacher and students determine the start and end dates of the project, the visual aids to be used (literature, sources, visual aids, etc.), the ways to obtain them, and the forms of work (individual or small groups work). In the process, the teacher can answer questions or give advice. Students are responsible

for the implementation of the work. The results of the research can be expressed in the form of reports, maps, illustrations, photographs, tables, graphs.

**16. Cubing.** Cubing is a strategy designed to help students think about a topic or idea from many different angles. It means that cubing strategy help students better understand the topic using six different perspectives appropriate to the topic. This is one of the research methods and allows for a comprehensive study of the topic. The student focuses on describing and comparing, correlating, analyzing, applying, and discussing the topic through cubing. Meantime, the student's critical and logical thinking develop, a comprehensive view of the subject, the ability to evaluate, and cooperation skills are formed. This method allows the teacher to study the topic and the situation in details to create conditions for complex and integrative approaches of students. 1. The cube is made. 2. One of the six instructions is written on each side of the cube (this is written in the annex to the interactive worksheets). 3. The topic to be discussed is determined. 4. The class is divided into six groups and each group is given the instruction on the topic. 5. Students are given instructions. 6. Students describe, compare, coordinate, analyze, apply, argue. 7. They present. 8. They draw conclusions and make generalizations. 9. The final version is hanged on the board.

**17. Jigsaw.** Using the method of Jigsaw on relatively large texts facilitates the efficient use of time and develops collaborative skills. The work begins with dividing into parts and numbering the text to be studied. Students divided into groups, count from 1 to 4. The students (natives) in the group are marked with the appropriate numbers, then the students with the same number (experts) gather around the desk, read the corresponding part of the text and complete the assigned

tasks. Once the work is completed, the second stage begins. The experts come back to their previous groups, share the information obtained as an expert, and complete the work on the text.

**18. Aquarium.** The purpose of this method is to develop discussion skills. Aquarium can be carried out in several ways.

The first version of conducting the **Aquarium**.

With the help of students, the rules for conducting discussions are determined (for example: following the rules and not interrupting each other's speech). Students are divided into two groups. The participants of one group sit in chairs inside the circle, discussing the problem suggested by the teacher. Students of another group sit in chairs outside the circle and observe the discussion following the rules.

The first group discusses a specific topic. After 15-20 minutes, the discussion ends, the participants of the "external circle" evaluate the discussion process, then change places and continue discussing the problem. The second version of conducting the **Aquarium**.

Participants in the inner circle discuss the problem proposed by the teacher and, unlike the first option, give arguments only in the favor of the problem. Participants in another group sit in chairs in the outer circle, listen to evidence, write down, analyze and develop their arguments. After 15-20 minutes, the discussion suspends, the participants in the inner and outer circles change places. The discussion is held to disprove the argument of the students sitting in the previous inner circle.

Here, groups may not come to a common opinion.

### ***14.5. Factors of the training process***

Many different factors affect the process and outcome of the training process. If the teaching process develops according to a scenario that is not clear to the educator, it will lead to unexpected, often undesirable results. If educators want to manage the learning process and bring students to the intended level of training on time, they need to know all the **reasons** on which the final learning outcomes depend. In the current pedagogical terminology, it is accepted to name the reasons as **factors** that affect the process and results of the educational process.

All factors affect the productivity of the training process simultaneously and in general. This effect is complex. Four main factors form the product of the training process in a complex way:

- 1) teaching material;
- 2) organizational and pedagogical impact;
- 3) students' ability to read;
- 4) time.

**The first major factor is *the teaching material*.**

The teaching material has very specific information. Compared to other information, it is pedagogically developed information. The suitability of the information for the teaching process, its relevance to the power, the results obtained in training depend on the level and quality of pedagogical processing of this information.

Thus, the main factor in the *teaching material* consists of two complex (objective information, pedagogically developed information), six general (content, quantity, quality, form, structure, interpretation), and more than 50 general reasons.

The second major factor is ***the organizational and***

***pedagogical impact factor***. It combines a number of effective reasons. These reasons characterize the activity of teachers, the quality of the organization of the teaching process, the conditions of teaching, and pedagogical work. There are two complex factors in it:

- 1) organizational and pedagogical impact on lessons;
- 2) organizational and pedagogical impact on extracurricular and out-of-class activities.

The general factors that characterize the organizational and pedagogical impact in the classroom are teaching and learning methods; forms of organization of training (basic and auxiliary forms); teaching situations (ready delivery of teaching material to students, controlled cognitive activity of students, independent work, etc.); teacher's ability to work (working hours, workload, work shift and routine, day of the week, quarter, age and teaching quarter); students' ability to work (duration of the study, study shift, day of the week, lesson schedule, age, hours of work and rest, total and training workload and school quarter); control, teaching aids, teaching equipment, training conditions.

The third major factor is ***students' ability to read***. This factor includes students' ability to read (suitability) and the potential to achieve predictable results promptly. It is advisable to test the reading ability individually and in groups. Here, too, there are two complex factors:

- 1) ability to read in class;
- 2) ability to read in extracurricular and out-of-class activities.

The fourth major factor is ***time***. It can also be divided into two parts:

- 1) time spent directly in the classroom;
- 2) time spent on reading independently.

There are more than 20 common factors in the *time* head factor. They are factors related to the time spent in the classroom and out of class. Factor analysis shows that about 150 common factors influence on the process and learning outcomes in the classroom. The number of effective reasons reaches 400-450.

Thus, the productivity of the training process is determined by the complex effect of four main factors.

***Check yourself.***

**1. When did the notion of training technology enter the scientific circulation?**

- A) beginning of the 50s in the XX century.
- B) beginning of the 80s in the XX century.
- C) in the 60s of the XX century.
- D) in the 70s of the XX century.
- E) at the beginning of the XXI century.

**A) B) C) D) E)**

**2. Define the correct line of the functional components of teacher's activity:**

- A) design component; gnostic (cognitive) component; constructive component.
- B) gnostic (cognitive) component; design component; organizational component; constructive component; communicative component.
- C) design component; organizational component; constructive component.
- D) communicative component; organizational component; design component.
- E) constructive component; organizational component

**A) B) C) D) E)**

**3. Define the operations of teacher's training technologies:**

- A) operations for acquisition of knowledge; operations to transfer knowledge to students.
  - B) operations to design training and education-upbringing goals;
  - C) all are true.
  - D) operations to organize the training and educational process;
  - E) determining the structure of the training and educational process;
- A) B) C) D) E)**

**4. Match the components to their elements:**

*1. Gnostic component*

*2. Designing component*

*3. Constructive component*

*4. Communicative component*

*5. Organizational component*

a) long-term goals (prospects), operations, tools.

b) knowledge about training, educational goals, the content of the subject taught; to study students; to learn the principles and technologies of teaching; to hold training and lessons, etc.

c) a set of operations for verbal and non-verbal interaction with students.

d) a set of operations to prepare for the next session.

e) a set of operations to prepare and conduct sessions

**A) 1a; 2c; 3d; 4e; 5b      B) 1c; 2e; 3a; 4d; 5b      C) 1b;  
2d; 3e; 4a; 5c    D) 1b; 2a; 3d; 4c; 5e    E) 1d; 2c; 3b; 4e; 5a**

**5. The most important principles of application of new technologies are:**

- A) The principle of educative training; the principle of developmental training.
- B) The principle of achieving success; the principle of feedback with students.
- C) The principle of revision; the principle of optimal mental stress; the principle of maximum participation of the student in the training process
- D) The principle of orientation to the zone of proximal development; the principle of unification for common purposes.
- E) All of these are true.

**A) B) C) D) E)**

**6. Choose the interactive teaching methods:**

- 1) Brainstorming
  - 2) Individual work
  - 3) KWL
  - 4) Auction
  - 5) Carousel
  - 6) Pair work
  - 7) Clustering
  - 8) Revealing the notion
  - 9) Word associations
  - 10) Presentation
- A) 1, 3, 4, 5, 7, 8, 9
  - B) 2, 4, 5, 6, 7, 8, 10
  - C) 1, 2, 4, 5, 6, 8, 9
  - D) 2, 3, 4, 5, 6, 7, 8
  - E) 3, 4, 5, 6, 7, 8, 10

**7. Choose the interactive teaching methods:**

- 1) INSERT
- 2) Venn diagram
- 3) Problematic situation
- 4) Questionnaires and interviews
- 5) Small group work
- 6) Project preparation
- 7) Cubing
- 8) Jigsaw
- 9) Presentation
- 10) Aquarium

**A) 1, 2, 3, 5, 6, 7, 8, 9**

**B) 2, 3, 4, 5, 6, 7, 8, 10**

**C) 1, 2, 3, 4, 6, 7, 8, 10**

**D) 2, 4, 5, 6, 7, 8, 9, 10**

**E) 1, 3, 4, 5, 6, 7, 8, 9**

**List of recommended literature**

**Chapter XIV**

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2. How To Train Employees On a New System Or Technology: 5 Tips. <https://www.edgepointlearning.com/blog/how-to-train-employees-on-new-system/>

3. Ten Guiding Principles for the Use of Technology in Learning. <https://teachonline.ca/tools-trends/how-use-technology-effectively/ten-guiding-principles-use-technology-learning>

4. Factors Impacting Employee Training. [https:// smallbusiness.chron.com/factors-impacting-employee-training-37613.html](https://smallbusiness.chron.com/factors-impacting-employee-training-37613.html)

5. New Pedagogical technologies and their application in foreign language lessons. [https:// www.cyberleninka.ru/article/n/new-pedagogical-technologies-and-their-application-in-foreignlanguage-lessons/viewer](https://www.cyberleninka.ru/article/n/new-pedagogical-technologies-and-their-application-in-foreign-language-lessons/viewer)

## CHAPTER XV

### DIAGNOSTICS OF STUDENTS IN THE TRAINING PROCESS

#### *15.1. Diagnostic of student's level of learning*

The purpose of diagnostics is to accurately identify, analyze and assess the conditions of the educational process and its results. Without diagnostics, it is impossible to effectively manage the training process, to achieve optimum results in the current conditions.

It's obvious that diagnostics has a broader and profound meaning than traditional testing of students' knowledge and skills. Testing only determines the results but does not explain their formation and development. Diagnostics studies the obtained results together with the ways and rules of their achievement revealing the formation dynamics of training products. Diagnostics includes control, inspection, assessment, collection of statistical data, analysis, and prognosing of further developments of events.

Monitoring and assessing students' knowledge and skills are the crucial components of diagnosis. At its time, Y.A.Comenius noticed the contradictory nature of assessment and appelaed teachers to use it wisely and carefully. Teacher should adjust objectivity with humanism in the process of assessing students' knowledge.

#### *15.2. Control of students' progress*

Control means identifying, measuring and evaluating students' knowledge and skills. Control is a general and

basic notion. Revealing and identifying knowledge is called *examination*. Its main didactic function is to provide the teacher with the feedback about the teacher's and student's relationships, to receive objective information on the assimilation of the educational material and reveal the gaps in the knowledge on time. Therefore, examination is an integral part of control. The purpose of examination is to determine the student's level of learning and the amount of the student's learning work. Additionally to examination, control includes assessment (*as a process*) and grade (*as a result*).

The outcome (*result*) of control is the basis for assessing student's progress. In this case, both quantitative and qualitative indicators of students' work are considered. Quantitative indicators are recorded in points or percentages, and qualitative indicators are expressed as excellent, good, sufficient and etc. Doing well is recorded in assessment charts, class journals in the form of marks, signs (symbols).

The function of assessment is not limited to identifying the student's learning level. It also means the teacher's tool to stimulate learning, positive motivation, and influence on the personality. Under the influence of objective assessment, students assess themselves and develop a critical attitude to their achievements. Therefore, the importance of assessment and its functions require the search for such indicators that reflect all aspects of students' learning activities and ensure their identification.

From this point of view, it is necessary to reconsider the current assessment system of knowledge and skills to increase its diagnostic value and objectivity.

Essential principles of diagnostics and control of student progress are the principles of *objectivity*, *consistency* (*systematicity*), *transparency*.

**Objectivity** consists of scientifically grounded content of

diagnostic tests, equal and friendly attitude of the teacher to all students, defined criteria for assessment of knowledge and skills.

The principle of **consistency (systematicity)** requires the implementation of regular diagnostic control at all stages of the didactic process, i.e., from the initial perception of knowledge to their application, from the first day of students at school to the last day of it. School control should be implemented frequently to make it possible to carefully check all the important things that students need to know and be able to do.

The principle of **consistency (systematicity)** requires a comprehensive approach to diagnostics. In this case, different forms, methods, and tools of control, examination and evaluation should be used together. Such an approach denies the universality of specific methods and tools of diagnostics.

The principle of **transparency** (clearness) is that all students are openly tested according to the same criteria.

Diagnosis, testing, and assessing students' knowledge and skills should be performed in a logical sequence.

**The first step.** Preliminary determination of students' knowledge is the first step in the examination system. This is usually implemented at the beginning of the school year. The purpose is to determine the students' knowledge on the elements of the subject that they studied in the previous school year. Preliminary testing is compatible with compensatory, rehabilitative training, as it also aims to fill gaps in learners' knowledge and skills. Such a testing can be carried out both at the beginning and in the middle of the school year and at the beginning of learning a new section of the subject.

**The second step.** This stage is the **current check**

(current examination) in mastering each topic that is being studied. Current examination is carried out from lesson to lesson, but despite that, it allows to diagnose the assimilation of separate elements of the curriculum by students. The main function of the current examination is to teach. The methods and forms of such examination might be different. They depend on the purpose of the training, the content of the educational material, its difficulty, the age and level of preparation of students and other factors.

**The third step.** The third step in testing knowledge and skills is **retesting**. This **testing** should be thematic as the current testing. In addition to learning new material, students review a previously learned topic in parallel. **Retesting** helps to strengthen knowledge. This test is most effective when adjusted to other types and methods of diagnostics.

**The fourth step.** The fourth step in the testing system is **periodic examination (periodic testing)**. Periodic testing tests students' knowledge, skills, and habits in any section or main topic of a subject.

The purpose of periodic testing is to diagnose the quality of assimilation of connection between the structural elements of the studied educational material in different parts of the subject. The main function of periodic testing or examination is to systematize and generalize knowledge.

**The fifth step.** The fifth step of examining or testing is the **final examination**. In this case, students' knowledge, skills and habits at all stages of the didactic process are assessed. Final examination and consideration of learning are carried out at the end of each term and school year. This should not be understood as a collection of points and a mechanical extraction of the average grade. This is, first of all, to diagnose students' actual level of learning in accordance with the goal set at a certain stage.

**Complex examination.** It is a particular type of examination. With the help of this testing, the ability of students to apply their knowledge and skills in solving practical problems is diagnosed. The main function of complex examination is to diagnose the quality of interdisciplinary connection. Students receive information studying different subjects and relying upon this information, their ability to explain events and processes becomes a practical criterion of complex examination.

When the teacher gives a grade on the existing criteria, he or she must verify the grade each time. Experienced teachers are well aware of this and always make such generalizations to avoid conflicts with students.

There can be various reasons for subjectivity allowed by teachers when assessing knowledge.

It is interesting that teachers involuntarily address and value students who sit at the front desks more than those who are at the back desks. Sometimes the grade given to students depends on the subjective tendencies of the teacher. For example, teachers with beautiful calligraphy prefer students with beautiful handwriting. Teachers who are sensitive to correct pronunciation punish students with speech impediments unnecessarily.

One of the reasons for the biased assessment is the insufficient development of the assessment criteria. Pedagogical subjectivity is the main reason for today's students who prefer computerized forms of control and control tests, in which teachers are less involved.

The teacher must pay attention to the objective and realistic assessment of the student's work. In addition, it is necessary to explain to the student why just this grade is given each time.

When considering the ratio of verbal (oral) and written forms of control, preference should be given to the written form. Verbal control helps answer questions quickly and develop appropriate speech, but does not provide the necessary objectivity. Written control not only provides high objectivity but also helps to develop logical thinking. Written control accustoms accuracy, conciseness and coherence, i.e., to express ideas coherently.

There is a difference in the field of determining the assessment system. This diversity manifests itself in both the principles of assessment and specific approaches in the rules of assessment and writing marks. Different systems of assessment of knowledge, skills, and habits are applied in foreign schools. Different assessment scales have been adopted in different countries (one hundred, twelve, ten, etc.).

In the late 19th and early 20th centuries, Russia, including Azerbaijan, had a six-point (0, 1, 2, 3, 4, 5) scoring system for assessing knowledge. During the Soviet era, the grade of 0 (zero) was abolished, and the five-point system was maintained. Gradually, the mark of 1 disappeared. Starting from the 1950s, the mark of 2 began to be used less. The five-point assessment system became a three-point system. For most students who could not study with a score of 4 or 5 became a two-point scale (2, 3). Such an assessment system stimulates learning poorly, and the level between 3 and 4 is impossible for most students. Therefore, many teachers add **plus** and **minus** to the usual five-point scale. This shows that teachers are looking for ways to increase the stimulating role of the five-point scale. But this is not the way out. Teachers who put the same minus and plus signs will do the same in the 9, 12, 100 point systems. Therefore, instead of changing the scoring system, it is more important for teachers to use the existing scoring system correctly. Therefore, it is more

important for teachers not to change the assessment system but use the existing assessment system correctly.

Sometimes teachers also send letters to parents while writing grades in students' diaries. There is nothing unusual here, but not enough attention is paid to one issue. If we look at these diaries, we can see that teachers mainly write about the negative aspects of students' behavior. But negative stimulation destroys the motivation to study. It is known, that in grades 5-6, a sense of responsibility of some students gradually decreases. Decreased sense of responsibility occurs, especially of those students whose diaries contain negative comments. Therefore, it is recommended to avoid reprimanding a student in front of the class as much as possible and give a place to one-on-one conversations. It should be remembered that a positive stimulator has a stronger effect on the development of motives than a negative stimulator.

### ***15.3. Diagnostics of students' ability to learn***

Diagnostics of students' level of learning (studying) is inseparable from the diagnostics of their ability to study. Important components of the notion of ability to learn are:

- 1) potential opportunities of the student;
- 2) knowledge base of the student (thesaurus);
- 3) ability to generalize thinking (generalization of the thinking process);
- 4) the pace of progress in training (progress in acquisition of knowledge).

Potential opportunities combine the individual characteristics (qualities) of a student as a factor. They include the ability to comprehend, be prepared for mental

work, learn, the success of cognitive activity, and etc. Here, the formation of mental operations, the breadth of knowledge, the general erudition of students, the development of their speech, the level of knowledge acquisition, skills, and other qualities are more important. The ability to generalize thinking is a complex factor determining a student's capability to learn. This is a strong factor that affects the quality of the cognitive process. Strength, quickness, independence, economy, and other thinking characteristics significantly determine the capabilities and preferences of each personality in training.

A person who is better able to study (learn) has the advantage over a person who has a low characteristic in this quality, and this is practically manifested in the pace of acquisition of knowledge and skills (on time), progress in learning, and increase in results.

Students' potential, their actual knowledge and skills base, and thinking characteristics also affect the pace. It turns out that just pace is the defining characteristic of learning. Thrift in training means increasing the pace of learning and reducing the time spent on it.

Thus, learning is not a permanently defined quality of personality. This dynamic process that develops under the influence of various reasons can be purposefully managed.

#### ***15.4. Assessment of student achievements***

Assessment of student achievement is an extensive and comprehensive process. This process serves to determine the level of learning outcomes achieved by the student and improve the quality of education as a whole. Assessment is an important factor that manages the quality. This is required to monitor the activities of students constantly, to follow their

progress or failures, and with this purpose to conduct monitoring in the process of assessing student achievement, which is of a continuous and dynamic nature.

By the resolution of the Cabinet of Ministers No.9, dated January 13, 2009, the Concept of Assessment in the General Education System of the Republic of Azerbaijan was approved. The concept includes the requirements for assessment activities in modern times, the tasks of the student assessment system, the main characteristic features, the main types of assessment, the development of assessment standards and assessment tools, the essence and content of intraschool assessment, the system for monitoring of student achievement and progress, assessment on curriculum (determining the compliance of student activities with learning standards), final examinations (final assessment at general education levels), the objectives of the national assessment, the purpose and structure of the guidelines for national assessment, the main activities, measures to be implemented within the international assessment program. According to the concept, the assessment system adopted and applied globally, encompasses 3 directions – *intraschool*, *national* and *international* assessment. They take a comprehensive approach to student achievement. The student's results in previous years and in the graduating class are taken into account in the new system.

Content standards are integrative learning outcomes, that enable students to change levels by achieving relevant knowledge, skills, and values. Each subject curriculum uses content standards and strategies to master them. In addition to this, relevant assessment standards are used to assess the achieved learning outcomes, acquired knowledge, and skills. Assessment standards determine the extent to which changes

have taken place by examining the level of acquisition of content standards, that have been realized. When setting the assessment standards, the final assessment (examination) is conducted at the national level for the relevant grades through the exam-based method and by the agreement of all interested parties, and the standards are determined by analyzing the results.

For example:

- minimum – standards achieved by 90-100 percent of students;
- high – standards achieved by 30% of students at best.

**The principles of assessment are as follows:**

- equality – to conduct an assessment by creating equal opportunities in teaching;

- justice – to treat everyone with the exact requirements;

- expediency - the method, the means are relevant to the purpose of the assessment;

- transparency – to give everyone the same information about the results in a completely obvious, clear way;

- confidentiality;

- ensuring reliability and trustworthiness;

- cooperation – mutual evaluation of achievements and educational opportunities;

- effectiveness - the efficiency of the assessment aimed at the goal.

Assessment based on the principles helps obtain complete information, choose a development strategy, identify gaps and decide on further steps. With full adherence to the principles, the following goals can be achieved:

- assessment of the system for better management, i.e., improving the quality of management;

- to inform the public about the results of the assessment in a completely obvious way;

- to determine the perspective action strategy.

In order to properly carry out the assessment process, it is necessary to make correct diagnosis of the teaching process. At first, it is important to gather information about the teaching process, create a database, and then start the activity. Following the sequence below can give an effect during the process:

- purpose;
- internal connection of actions;
- reality of selected actions;
- hit the target;
- quality level of activity.

Following the principles in the assessing processes and outcomes can result in a fair and objective assessment. The database based on the obtained results can be considered reliable.

Assessment of student achievement is divided into *international*, *national* and *intraschool* assessment directions.

**International assessment.** This direction of assessment performs the functions of improving and assessing the quality of education. Here comparative research is carried out through monitoring. And, opportunities are created to get information on the state of education in the country, identify more important problems that need to be solved, research them and compare the results with foreign countries. This assessment aims to assess students' ability to use acquired skills and is carried out every three years. It serves to study the factors that explain the difference among the students of participant countries (characteristic features of students and their families, educational institutions and teaching process), mathematical literacy, reading literacy, science literacy, and

in addition to this, to assess the ability to solve different types of problems.

**National assessment.** This assessment is a system that is regularly implemented at the end of a certain academic period to monitor the quality of education, and to assess student achievements. By making a particular representative sample of students in grades 4 and 9, objective tests, questionnaires and related instructions are carried out usually every 4-5 years. And the obtained results serve to assess the quality of the curriculum, teaching and learning process, and other changes in education. It gives an opportunity to assess and more effectively monitor the quality of education. The environment of training provides additional information about the changes in educational practices and views of the interested parties involved in the educational process and other factors that affect student achievement.

**Intraschool assessment.** This assessment is based on mentioned directions of assessment and assessment tools above. Intraschool assessment includes the following key types of it:

- diagnostic assessment (assessment of the initial level);
- formative assessment (monitoring of progress and failures);
- summative assessment (main summative, sub summative and final assessment).

Student progress is monitored in the form of formative and summative assessments. Formative assessment is based on teacher's continuous observations and is recorded by monitoring the level of progress and the necessary measures are identified.

***Check yourself.***

**1. Identify the wrong statement about diagnostics?**

- A) It is possible to manage the training process effectively, to achieve optimum results in the current conditions without diagnostics.
- B) It accurately identifies, analyzes and assesses the conditions of the educational process and its results.
- C) It has an extensive and deep meaning than traditional testing of students' knowledge and skills.
- D) It studies the obtained results together with the ways and rules of their achievement, revealing the formation dynamics of training products.
- E) It includes control, inspection, assessment, collection of statistical data, analysis, and prognosing of further events developments.

**A) B) C) D) E)**

**2. Match the principles to their meanings:**

*1. The principle of objectivity*

*2. The principle of consistency*

*3. The principle of transparency*

a) It requires the implementation of regular diagnostic control at all stages of the didactic process from the initial perception of knowledge to their application, from the first day of students at school to the last day of it.

b) It consists of scientifically grounded content of diagnostic tests, equal and friendly attitude of the teacher to all students, clearly defined criteria for assessment of knowledge and skills.

c) It is the principle that all students are openly tested

according to the same criteria.

- A) 1c; 2a; 3b    B) 1b; 2a; 3c    C) 1b; 2c; 3a  
D) 1a; 2c; 3b    E) 1c; 2b; 3a

**3. What is the logical sequence of the steps in diagnosis, testing, and assessing students' knowledge and skills? Match the equivalents to the steps.**

1. *the first step*

2. *the second step*

3. *the third step*

4. *the fourth step*

5. *the fifth step*

a) periodic examination (periodic testing).

b) final examination or testing

c) retesting

d) current check (current examination)

e) preliminary testing

A) 1a; 2c; 3d; 4e; 5b    B) 1c; 2e; 3a; 4d; 5b

C) 1e; 2d; 3c; 4a; 5b    D) 1b; 2a; 3d; 4c; 5e

E) 1d; 2c; 3b; 4e; 5a

**4. Define the correct line of the principles of assessment.**

A) expediency, transparency, confidentiality.

B) justice, expediency, transparency.

C) confidentiality, cooperation, effectiveness.

D) equality, justice, expediency, transparency, confidentiality, cooperation, effectiveness.

E) equality, justice, expediency, transparency.

A)    B)    C)    D)    E)

**5. What are the directions of assessment?**

- A) intra-school assessment, formative assessment.
  - B) national assessment, summative assessment.
  - C) international assessment, diagnostic assessment.
  - D) formative assessment, international assessment.
  - E) intra-school assessment, national assessment, international assessment.
- A) B) C) D) E)**

**List of recommended literature  
Chapter XV**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

2. Diagnostic Assessment in Education: Purpose, Strategies, Examples. [https://www.formpl.us/blog/diagnostic – assessment](https://www.formpl.us/blog/diagnostic-assessment)

3. Diagnostic Assessment: Examples | What is Diagnostic Assessment? <https://study.com/learn/lesson/diagnostic-assessment-examples.html>

4. Assessment Types: Diagnostic, Formative and Summative. [https://www.queensu.ca/teachingandlearning/modules/assessments/09\\_s2\\_01\\_intro\\_section.html](https://www.queensu.ca/teachingandlearning/modules/assessments/09_s2_01_intro_section.html)

## CHAPTER XVI

### THE ESSENCE AND CONTENT OF THE UPBRINGING PROCESS

#### *16.1. The content and features of the upbringing process*

*The content of upbringing* means a system of knowledge, beliefs, personality traits, qualities and stable behavioral habits. Students must master them in accordance with the goals and objectives that are set for them. Mental, aesthetic, labor and ethical upbringing and physical training combined in a single pedagogical process is the most important condition for the comprehensive and harmonious development of the personality.

Some specialists view the process of upbringing as a system that performs only educative functions which is a wrong thought. All the educative works conducted outside the classroom through various educational methods are based on the knowledge. These works are carriers and transmitters of information. In this sense, there are elements of upbringing in educational work. The needed knowledge for a person's practical activity and behavior is taught here as well. If we have an ethical conversation with students outside the class, we want to teach them some ethical knowledge and behave accordingly. This is the learning process itself. Therefore there is no pure upbringing work. As all types of activities in the classroom system perform educational, upbringing and developmental functions, all types of extracurricular activities (out-of-class and out-of-school) also perform educational (*educating*), upbringing and developmental functions. This is the essence of a common pedagogical process in school.

Extracurricular and out-of-school education and upbringing is a process of purposeful formation of personality. It is a managed and controlled interaction between educators, teachers and students. The main goal of this effect is to form a personality that is necessary and useful for society. In the modern sense, the process of extracurricular education is an effective interaction (cooperation) of teachers and students to achieve the common goal.

This process has a number of features:

**The process of upbringing is a purposeful process.**

When the purpose of education is close and clear to the student, the organization of the process provides the highest efficiency.

**The process of upbringing is a multifaceted process.**

Many objective and subjective factors manifest themselves in this process. They all together complicate the process unimaginably. It has been determined that the correspondence of subjective factors expressing the internal needs of the personality to the objective conditions in which the student lives and is formed, contributes solving educational tasks successfully. The activity of teachers who manage this process is conditioned not only by the objective laws, but also to a large extent by their skills and mastery. This mastery expresses the uniqueness of teachers' personality, their individuality, character and attitude towards students.

**The process of upbringing is a complicated process.**

This means that its results are not noticeable as quickly as in the training process. There is a long period between the pedagogical manifestation of courteousness and rudeness, creating the necessary qualities in the personality. A person

undergoes various influences and experiences, not only positive, but also negative experiences. This negative experience needs to be corrected. The complication of the educational process is that it is dynamic and changeable.

**The process of upbringing is a long process.** The 18<sup>th</sup> century French philosopher Claude Adrien Helvetius wrote: I continue to study. My upbringing is not over yet. When will it end? .. After I die. My whole life is actually a long-term upbringing. School upbringing (education) leaves a deep imprint on a person's mind. The nervous system is characterized at a young age by high plasticity and sensitivity. Even when the schooling process is well-organized, there is no hope that students will succeed in their behavior in a short time. The remoteness of the results is characteristics of the upbringing process.

**The process of upbringing is a complex process.** This means that the educational process's goals, objectives, content, form and methods are united. All this is subordinated to the idea of a full formation of personality. The formation of personality qualities does not happen in turn, but it happens simultaneously, in a complex way. Therefore, the pedagogical impact must be complex. However, this does not exclude the need to pay more attention to qualities that do not correspond to the development of other qualities according to the level of formation.

**The process of upbringing is a changeable and indefinite process.** The educational process results, organized under the same conditions can differ significantly from each other. It depends on the influence of subjective factors: individual differences of students, their social experience, their attitude to education. The level of professional preparation of teachers, their qualifications, and the ability to manage the process greatly influence on the

educational process and its results.

**The process of upbringing is a two-sided process.** It is realized in two directions: from teacher to student (direct contact) and from student to teacher (feedback). The management of the process is mainly built on the bases of the feedback, i.e., the information that comes from students.

### ***16.2. The system and structure of the upbringing process***

The process of upbringing is a complex dynamic system. Each component of this system, in its turn, can be considered a system, because it also has its own components. To study the dynamics of upbringing process means to determine the time of its occurrence, its formation and ways of development. There are many criteria to separate and analyze the systems in the upbringing process. The model of the system of upbringing process in modern pedagogy has been built on the following criteria:

- criteria of goals and objectives;
- content of the upbringing process, criteria for the conditions in which the process takes place;
- criteria for interaction between educators and students;
- criteria of applied methods;
- criteria for the forms of bringing up activity;
- criteria for the development stages of the process in a definite time, etc.

The structure of the upbringing process consists of the following stages:

***1. Understanding student's required norms and rules of conduct (behaviour).*** Without this, the formation of rules of behavior of a person cannot be successful. It is necessary to start the formation of these rules in time. Because timely

correction of behavior (often with the use of corporal punishment) leads to a quick correction of the situation and getting the desired result.

**2. Conversion of knowledge into belief.** Beliefs are views based on certain principles. They play an important role in the activities of every person. The process of upbringing without beliefs develops slowly and does not always give the desired results. For example, children still know from kindergarten that it is necessary to greet the teacher, but why don't all children follow it? Because they are not sure of the necessity of this behaviour. So, the upbringing work stopped at the initial stage of knowledge, and it did not pass to the second stage of belief.

**3. Formation of feelings.** One of the most important components of the upbringing process is the formation of feelings. The ancient philosophers said that a person could not search the truth without feelings. Educators achieve the correct and quick assimilation of the required norms and rules by referring to these feelings.

### ***16.3. General objective laws of the upbringing process***

The general objective laws or regularities of the upbringing process are applied to the entire educational system. General objective laws express important connections between the largest components of that process.

***The effectiveness of the upbringing process*** in educational practice depends on a number of conditions (factors).

1. Dependence of the effectiveness of bringing up process on the existing educative relations.

2. Dependence of the effectiveness of the bringing up process on the compatibility of goals and organization of

activities.

3. Dependence of the effectiveness of the upbringing process on the compatibility of social practice and the nature of the educational impact on students.

4. Dependence of the effectiveness of the upbringing process on all total effects of subjective and objective factors.

5. Dependence of the effectiveness of the upbringing process on the intensity of bringing up and self-education.

6. Dependence of the effectiveness of upbringing on the rationality of training and development processes.

7. Dependence of the effectiveness of upbringing on the quality of educational impact.

8. Dependence of the effectiveness of upbringing on the intensity of the impact on the inner world of the student.

9. Dependence of the effectiveness of upbringing on the intensity of students' interactions and the quality of communication.

#### ***16.4. Principles of the upbringing process***

The principles applied in extracurricular, i.e., out-of-school education and educational and upbringing activities are conditionally called the principles of upbringing. As in extracurricular activities not only upbringing functions but also educational and developmental functions are performed, they are conditionally called educative principles.

The principles of upbringing are the initial provisions that express the content, methods and basic requirements for the organization of the educational process. These provisions reflect the specificity of the educative process. Let's characterize the requirements for the application of the upbringing principles:

**1. Compulsion.** The principles of upbringing are not advice, they are not recommendations, they must be definitely and completely implemented (followed up) in practice. Systematic violation of the principles, denial of their requirements reduces the effectiveness of the upbringing process.

**2. Complexity.** This means that the principles of upbringing should not be applied in turn, in isolation from each other, but simultaneously at all stages of the educational process. Principles should be applied in a frontal way.

**3. Equal importance.** The principles of upbringing are as equally important as the general fundamental provisions. There are no first-class or collateral provisions among them. By paying equal attention to all principles, it is possible to prevent violations that may occur in the upbringing process.

The principles of upbringing are no ready-made recipes and universal rules. Without their guidance, it is impossible to achieve high results automatically. Principles cannot replace the educator's knowledge, experience and skills. Although the principles of upbringing are the same for everyone, their practical implementation depends on the individual.

Modern pedagogy has determined the following principles for extracurricular (intraschool and out-of-school) educational activities:

- 1) social orientation of upbringing;
- 2) connection of upbringing with life and labor;
- 3) referring to positive qualities in upbringing;
- 4) humanization of upbringing;
- 5) approach to personality;
- 6) unity of upbringing influences.

Let's characterize these principles now:

**1. Principle of social orientation of upbringing.**

Education should prepare a person for a social and active life. Relying on this provision, many educational systems successfully implement their ideological and political goals. Education (upbringing) is aimed at protecting the state system, strengthening its institutions, authorities, formation of citizenship and social qualities. In accordance with the state strategy, teachers direct all their activities to the formation of a socially acceptable type of personality and performs the public and state (socio-state) order in the field of education. In this case, if the state and public interests, as well as the personal interests of citizens overlap, then the requirements of the principle are consistent with the goals and objectives of education (upbringing). If the interests of the state, society and the individual do not overlap, then the realization of this principle becomes difficult.

**2. Principle of connection of upbringing with life and labor.** Even ancient educators believed that education (upbringing) that was separate from life and practice was meaningless. Formation of a human personality directly depends on human's activities, personal participation in social and labor relations. Therefore, it is necessary to form a positive attitude to labor by involving children in social life and various useful activities.

Life is the best school of upbringing. Therefore, the principle of connection of upbringing with life is one of the main principles in many educational systems. It requires educators to be active in two main directions:

1. Acquaint students with the social and labor life of people, the changes that take place in it in a wide and operative way.

2. Involve students in real-life relationships, various types

of socially useful activities.

Teenagers are eager to grow up. The younger a child is, the more opportunities there are to develop social feelings and strong behavioral habits. The plasticity of the teenager's nervous system allows achieving high results in solving all upbringing tasks.

The process of upbringing should be organized in such a way that children could feel the necessity of their work for people and society, and that they could be satisfied with labor.

**3. Principle of referring to positive qualities in upbringing.** If teacher can reveal a small positive quality of a student and then refer to that good quality in the process of upbringing, then the teacher will have the key to the student's heart gate and achieve high results.

The requirement of this principle is simple: *the educator should reveal the positive side of the student, should turn negative features into positive ones, referring to the student's good quality*. There are no purely negative, and one hundred percent positive person. *The purpose of upbringing is to achieve as many positive qualities as possible, and a few negative ones as possible*.

An educator or a teacher must follow certain rules in the implementation of this principle in order to be successful in the process.

Conflicts, teachers' struggle with the student, opposition of forces and positions should not be allowed in the process of upbringing. Only cooperation, patience and care of the teacher can give positive results.

Schoolchildren should not always be reproached for their mistakes and shortcomings in their behavior. Skilled educators, on the contrary, reveal their positive qualities and appreciate them. Experienced teachers are generous with

compliments. Such teachers shape good behavior, instill confidence and trust students, and encourage them during failures. Negative aspects, of course, must be criticized and corrected. However, the main thing is to identify and form the positive signs.

It is always pedagogically convenient to refer to the positive interests of students. Many issues of labor training, ethical upbringing, and aesthetic upbringing can be solved with the help of interests.

When applying this principle, it is necessary to create a positive background. This includes the life activities of students, the style of educative relationships and even the spirit of the educational institution. In a relaxed, business environment, everyone keeps busy with their work, and the effective organization of work and rest helps them to move forward cheerfully and confidently.

**4. Principle of humanization of upbringing.** This principle gives the following requirements:

- treat the student's personality humanely;
- respect the rights and freedom of students;
- give the students appropriate and reasonable requirements for their strength;
- respect the student's position (even if the student does not want to comply with the requirement);
- respect the students' desire (right) to be alone;
- bring to students' attention specific goals related to their upbringing;
- do not form the required qualities by force;
- renounce corporal punishment and other punishments degrading the honor and dignity of the person;
- introduce the right to refuse the qualities that for one reason or another contradict the beliefs of the individual, and

which has to be formed in individual, etc.

The Universal Declaration of Human Rights states: *All human beings are born free and equal in dignity and rights. They have a mind and a conscience and should treat each other with brotherhood.*

##### **5. Principle of approach to personality in upbringing.**

Pedagogical and psychological researches of recent decades show that it is more important to take into account the personality traits and abilities of students than to know their age and individual characteristics. The approach to a personality is understood as a reference to their personal qualities. These qualities express the orientation of the personality, tendency of evaluation (assessment), life plans, their status, and other motives that are predominant in the student's activity and behavior.

The principle of approach to personality in upbringing requires the teacher:

- to study regularly and know well the individual traits, characteristic features, views, tastes, habits of students;
- to know the real level of formation of important qualities, as a person's way of thinking, motives, interests, psychological states, attitude to life, labor, evaluation tendencies, life plans, etc., and be able to diagnose them;
- to involve each student in regular strengthening and increasingly difficult educative activities and ensure development;
- to identify and eliminate the reasons that impede the achievement of the goal, if these reasons cannot be revealed and eliminated on time, operatively to change the tactics of training depending on the new circumstances;
- to maximum refer to the personal activity of a person;
- to combine bringing up with self-education, help to choose goals, methods and forms of self-education;

- to develop students' independence, initiative, personal, amateur activities, to organize and direct their activity which will lead to success.

Complex implementation of these demands requires the teacher to take into account not superficial development, but the deep development of processes.

Age and individual characteristics are acquiring a new direction in the approach to personality. Potential opportunities, short-term perspectives are diagnosed. It is known, that a small school-age period creates maximum favorable conditions for the formation of moral and social qualities. Thus, it is easy to instill positive habits in the early school-age and early adolescence period, to accustom students to work, to discipline, and behave in society. Adolescents become active and initiators, set tasks for useful activities. Teachers must well organize this activity, the tendency to independence, because high school students are distinguished by their desire for independence. Relying on this feature, they develop high moral ideals and a sense of responsibility. It should be kept in mind that the potential for educating students gradually decreases, because as the child grows older, the plasticity of the nervous system decreases, the psychological resistance to external influences increases.

Individual traits include the features of perception, thinking, memory, speech, character, temperament, and will. It is very difficult to learn all these features in the conditions of mass education and upbringing. The teacher must spend extra time, energy and resources to succeed.

Taking into account the increase in the level of knowledge of modern students and their different interests, teachers should expertise not only in the subject they teach, but also in politics, art and culture in general. The teacher

must be a high moral example for students.

**6. Principle of unity in educational influences.** This principle is also called the principle of joint activity of teachers, public organizations and families in bringing up the growing generation, which coordinates the efforts of the school, family and community. This principle requires that individuals, organizations and public institutions engaged in educational work together, make their demands of their students on the basis of mutual consent, help each other and complete each other's work. If the unity and coordination of efforts are not achieved, the participants in the educational process will resemble the personages (characters) in the fable by Krylov (cancer, goose and fish). Because if efforts are not made in the field of upbringing, if they have the opposite effect, then it will be difficult to hope for success. In this situation, student experiences a tremendous mental burden, because he or she does not know whom to trust, and has difficulty in determining and choosing correct influences. The principle of unity of upbringing effects requires to release the student from this burden.

**The rules of application of the principle** help teachers to cover the following aspects of educational impact:

1. The personality of a student is formed under the influence of the family, friends, people around the student, public organizations, student teams, etc. Among these influences, the influences of the class collective and the personality of the educator play a big role. It is very important to take into account, that their requirements should not contradict each other.

2. The family plays important role in the formation of personality. Considering close relationships, individuality of influences, characteristics of children, the unique approaches to them (*parents know them much better than teachers*),

cannot be compared with any kind of pedagogical influence. Therefore, when strengthening the relationship with the family and solving educational tasks, it is required to plan carefully the upbringing effects.

A student diary is the most reliable way to connect with family. The pedagogically correct completion of this document allows for effective coordination of efforts between parents and teachers. As teachers do not have personal computer cards, that are used in Western countries, it is necessary to increase the role of the diary and to turn it into a major operational document that reflects the current life of the student.

3. The educator must be educated. Educators and parents should strive to have the qualities that they want to instill in their children.

4. In upbringing practice, sometimes disputed situations arise: teachers do not agree with the activities of parents, or, on the contrary, the family has a negative attitude to teachers' requirements. It is necessary to eliminate this misunderstanding, referring to the aspects, that unite the educational efforts of both sides.

5. Sometimes the teacher does not agree with the opinion of the collective, public organizations, criticizes the actions and work of other teachers. All this harms the formation of personal views and beliefs. Therefore, educators should not forget to defend reasonable requirements of each other and take care of the reputation of the collective.

6. Implementation of this principle requires the creation of upbringing system both in class and out-of-class time. Systematization is provided in the process of upbringing by following the inheritance and consistency in the formation of personality traits. It is necessary to refer to the positive

qualities and norms of behavior acquired in the upbringing work.

7. One way to achieve the unity and solidarity of upbringing effects is to coordinate the efforts of all participants in the educational process. Therefore, educators and class teachers should make every effort to establish and rebuild these relationships.

### ***16.5. Methods of the upbringing process***

The categories of purpose, content and form reveal the essence of the upbringing process. However, there is another category related to the way of bringing up. This is **the category of upbringing method.**

**Extracurricular educational methods are activities that are designed to influence the consciousness, will, feelings, and behavior of students in order to foster certain qualities for them.** The process of bringing up a student from a low level of upbringing to a higher level of upbringing is called the **upbringing process.** The upbringing goal can be achieved in different ways. An educator can find as many ways as possible to collaborate with students, referring to their strengths, abilities, and interests. Of course, in some ways, the goal can be reached quickly, while in others it can be achieved late. These ways are called **upbringing methods.** But in many cases, upbringing methods may be less effective. Therefore, the educator is always faced with the task of finding new ways. These methods are maximum suitable for the specific conditions of upbringing, allow to achieve the desired result quickly and with little effort. The correct choice and correct application of upbringing method is an important stipulation of pedagogical professionalism. It is very difficult to find the right ways that

best suit the conditions of a particular upbringing process.

No educator can create a completely new method of upbringing. But educators always have the duty of improving the existing methods. Such special improvements of upbringing methods are called **upbringing priyomes (techniques)**. Upbringing priyome is part of a method. Knowing the priyomes of upbringing methods and applying them correctly is one of the important characteristics of pedagogical skills.

There is also a notion of the means of upbringing in pedagogy. Priyome is understood as separate (individual) effects. The means is no longer a priyome, nor a method. For example, labor is a means of bringing up, but replica, irony, and comparison are priyomes. In this regard, the method of upbringing is sometimes understood as a system of priyomes and means, that are used to achieve the goal that is set. Because in the structure of the method there are definitely priyomes and means.

The behavior of schoolchildren is stimulated not by knowledge but by their beliefs and convictions. Therefore, at the stage of development of consciousness, there should be formed moral beliefs in the social necessity and personal usefulness of a certain type of behavior, rather than notions and judgements.

Confidence arises when different methods are used in the process of upbringing. Methods require from teachers high pedagogical skills and are applied in a complex way.

**1. Narration.** Narration on a moral topic is mostly used in the lower (junior) and middle classes. This is an emotional talk, an interpretation of concrete facts and events that have moral content. By influencing children's feelings, narration helps them to understand and assimilate the meaning of moral

values and norms of behavior. Good narration not only reveals the content of moral notions, but also creates a positive attitude in students to actions, relevant moral norms, and influences on behavior. The narration on an ethical topic has several functions:

- 1) narration is a source of knowledge;
- 2) narration enriches the moral experience of a person with the experience of other people;
- 3) narration serves to use a positive example in upbringing.

There are the following conditions for the effectiveness of narration on an ethical topic:

- 1) narration must be appropriate to the social experience of students;
- 2) narration must be accompanied by illustrations;
- 3) conditions must play a major role to correctly understand moral narration;
- 4) narration must be held only with high professionalism;
- 5) narration must evoke feelings, excitement and pleasant impressions in the audience.

**2. Clarification.** This is a method of influencing students verbally, emotionally. An important feature that distinguishes this method from the methods of interpretation and narration is that the impact is directed to a group or individual. Application of the method of clarification or explanation is based on the knowledge of the personality traits of the class and collective members. Clarification is based on the suggestion in school practice. Suggestion is that the student accepts the pedagogical effect without criticism. Suggestion affects the human psyche without being felt, creates a state of activity and motivation. Referring to this specificity of the psyche, the pedagogue uses insinuation when the student wants to accept a certain situation. The insinuation is used to

enhance the effects of other upbringing methods.

**3. Exhortation.** Exhortation is related to requests, clarifications, and impressions. The effect of exhortation depends almost entirely on the form of the teacher's statement. The pedagogical effectiveness of moral exhortation also depends on the teacher's reputation, personal moral qualities, and belief in the truth of words and actions.

It should be noted that the incompetent use of narration, clarification, exhortation, impression can take the form of notation. The exhortation, that bothers the child never works, it can have the opposite effect on the disciples, and they can act contrary to what is said.

**4. Ethical and aesthetic conversation (interview).** This is a systematic and consistent discussion of knowledge. Both parties – teachers and students take part in the discussion. Conversation differs from narration and instruction, here the teacher listens to interlocutors and takes their opinions into account, building relationship with them on the principles of equality and cooperation. This method is called ethical-aesthetic conversation, because its subject is mostly moral and aesthetic problems. The purpose of ethical and aesthetic conversation is to deepen moral and aesthetic notions, to generalize and strengthen knowledge, to form a system of aesthetic, moral views and beliefs. This method is especially relevant for students in grades V-VIII because a sensitive period of formation of worldview begins at this time .

**5. Dispute.** Disputes are lively, heated discussions on various topics. Disputes are held in the middle and high classes on political, economic, cultural, aesthetic and legal topics. In disputes, beliefs collide, different opinions are compared. At the heart of the dispute is an argument, a struggle of ideas. For the dispute 5-6 questions are prepared

and independent judgments are required. Dispute participants get acquainted with these questions in advance. Speeches should be lively, free, and short. It is not necessary to write the text of the speech, if so, the dispute will be boring and formal. The purpose of the dispute is not to conclude, but to process. The educator should help students concentrate and justify their positions.

**6. Example.** One of the exceptional powerful methods of upbringing is the example. The effect of the example is based on a well-known objective law: the event perceived by the visual organ leaves a quick and easy mark on the mind. The example affects the level of the first signal system, and the word affects the level of the second signal system. Example gives concrete images for imitation, and thus forms consciousness, feelings, beliefs, and activates the process. The Roman philosopher Seneca said: The path of moral exhortation is long, the path of example is short. An example is, first of all, understood as the example of specific people – parents, teachers, friends. Examples of works, films, historical figures, prominent scientists and political figures also have great educative power.

**7. Exercise.** This is a common method used to form the necessary qualities of a person. This method has been known since ancient times and has an exceptional effect. It is impossible to form the required type of behavior without involving students in active and purposeful activities. The essence of the exercise method is to perform the required actions repeatedly, up to the level of automation. As a result of exercises, a personality acquires stable skills and habits. These qualities play important role in a person's life.

The more exercises are done and the more often they are performed, the higher will be the level of development of the qualities, that are formed with their help. This dependence is

corrected by personality traits. Some students need to do a few exercises, while others need to fulfill dozens or even hundreds of exercises. For example, in order to get into the habit of tying shoelaces, it is necessary to tie them up to 200 times on average. It is difficult to imagine how much effort is required to form complex moral qualities.

**8. Requirement.** It should be noted that it is impossible to do without this method in the teaching process, too. With the help of this method, the norms of behavior are achieved, students are involved in certain activities, and some qualities of students are formed.

There are two types of requirements according to the form of presenting: *direct requirements*, *indirect requirements*. *Definiteness, concreteness, precision, imperiousness (authoritativeness) are characteristics of direct requirements*. The requirement cannot be explained differently here. The requirement is given in a decisive tone, which can be expressed in many shades (intonation, volume of voice, facial expressions).

Indirect requirements (advice, request, gesture, trust, appreciation, etc.) differ from direct requirements in that, the stimulus is no longer the demand itself, but the psychological factors (impressions, excitements, interests, efforts) created by it.

**9. Accustoming.** This is an intensive exercise. The method of accustoming is applied when it is necessary to form the required quality quickly and at a high level. Sometimes accustoming is accompanied by difficult processes. For example, the military training system. Here, accustoming or habituation is adapted to punishment. In humanistic education systems, the method of accustoming is used. Some elements of violence (coercion) that are

inevitably used in this method are for the benefit of the person. Humanist pedagogy opposes the harsh incitement to human rights and demands decreasing this method as much as possible.

**10. Task.** The task method gives good results. Teachers, through tasks, accustom students to positive actions. Tasks are different: to visit a sick friend and help him or her with training; to prepare toys for the sponsor kindergarten; to decorate the classroom before the holiday, etc. There's no need to explain to students how to complete the assignment (*especially to high school students*). Supervision can take many forms (*in the form of a task report on its fulfillment*). Control ends with assessing the task quality.

**11. Educational situation.** The method of organizing the activities and behavior of students in a specially created environment is shortly called the method of educational situations. There are a number of important moments to consider in order to successfully apply educational situations. Situations should not be made up. Situations in school life happen at every step.

**12. Incentives.** Incentives are the expression of positive evaluation of students' actions. It strengthens positive skills and habits. The effect of incentives is based on the awakening of positive emotions. That is why incentives create trust, good mood and increase responsibility. There are many different types of incentives: *approval* (assessment), *inspiration, praise, gratitudes, granting honorary rights, reward with a certificate and prizes*, and so on.

**13. Competition.** As children get together, they begin to clarify their relationship: who is who? Teenagers and young people tend competing with others, gain an advantage taking the first place. The tendency to assert students among people around, is a congenital need. This need is met by competing

with other people. The results of the competition determine and strengthen the status of a person in the team for a long time. Students compete in many things: who swims farther; who offends the teacher more; who gets more bad marks, etc. Schoolchildren compete relatively little in decent behavior. For example, we do not hear anything about the competitions of neatness, cleanliness, decency, honesty.

The method of competition, which dates back to very ancient times (and has a long time been forgotten) has suddenly been raised to the level of a major means in some foreign countries. Not surprisingly, this method was less effective in the Soviet school, and later it was used less. However, in a pedagogically correct competition, there are effective incentives to increase the effectiveness of the upbringing process.

Competition is a guiding method, that satisfies schoolchildrens' natural needs to compete with each other and gain an advantage, directs to cultivate the qualities necessary for a person and society. While competing with each other, schoolchildren quickly acquire the experience of social behavior and develop their physical, moral and aesthetic qualities. Competition is especially important for the students, who lag behind. They compare their results with the achievements of their peers, receive new stimuli for development, and begin to make great efforts. It is necessary to mitigate the conditions of the competition during the game. Students are not so excited about losing the game, because there is always a chance to make up for it. The game makes competition invitingly.

When students determine the purpose, objectives, and conditions of the competition themselves, its efficiency significantly increases. Students conclude the competition

themselves and determine the winner. Educator directs the initiative of the students.

**14. Punishment.** Punishment is one of the oldest methods of upbringing. The controversy on the expediency of its application in modern pedagogy does not end. Also discussions are used in this context as well as in all specific methods. Discussions continue with who, where, when, how much, and for what purpose the punishment is used. It's likely the educators will not be able to come to a consensus soon. Because there are two contradictory positions. According to the first position, the punishment should be toughened. According to the second position, the punishment should be completely removed.

Punishment is a method of pedagogical influence. This method aims to prevent undesirable actions of students, to eliminate them, to arouse the feeling of guilt in the face of himself and the people around. Like other methods of upbringing, the method of punishment involves the gradual conversion of external stimuli into internal stimuli. Various forms of punishment are used in modern schools: disapproval, rebut, reprimand, warning, discussion in the meeting, rebuke, to remove from class, to expel from school, etc.

*Check yourself.*

**1. Which one is not true for the process of upbringing?**

- A) a purposeful process.
  - B) a multifaceted process.
  - C) unchanged, definite process.
  - D) a complex process.
  - E) a long process.
- A) B) C) D) E)**

**2. Which one is not true for the process of upbringing?**

- A) a changeable, indefinite process.
- B) a two-sided process.
- C) a complicated process.
- D) one-sided process.
- E) a purposeful process.

A) B) C) D) E)

**3. Determine the sequence of stages of the upbringing process.**

- A) understanding the required norms and rules of conduct (behavior) by student, conversion of knowledge into belief, formation of feelings.
- B) conversion of knowledge into belief; formation of feelings, understanding the required norms and rules of conduct (behavior) by student.
- C) formation of feelings; conversion of knowledge into belief, understanding the required norms and rules of conduct (behavior) by student;
- D) understanding the required norms and rules of conduct (behavior) by student, formation of feelings; conversion of knowledge into belief.
- E) conversion of knowledge into belief; understanding the required norms and rules of conduct (behavior) by student, formation of feelings.

A) B) C) D) E)

**4. Match the requirements to the upbringing principles:**

1. *Compulsion*
2. *Complexity*.
3. *Equal importance*.

a) Upbringing principles should not be applied in turn, and in isolation from each other, but simultaneously at all stages of the educational process, and in a frontal way.

b) Upbringing principles should be definitely and completely implemented (followed up) in practice.

c) Upbringing principles are as equally important as the general fundamental provisions. By paying equal attention to all principles, it is possible to prevent violations that may occur in the upbringing process.

**A) 1c; 2a; 3b B) 1b; 2a; 3c C) 1b; 2c; 3a**

**D) 1a; 2c; 3b E) 1c; 2b; 3a**

**5. Define the correct line of principles of the extracurricular educational activities.**

A) social orientation of upbringing, connection of upbringing with life and labor.

B) connection of upbringing with life and labor, humanization of upbringing.

C) referring to positive qualities in upbringing, approach to personality.

D) humanization of upbringing; unity of upbringing influences.

E) all these are true.

**A) B) C) D) E)**

**6. Match the methods with their features.**

*1. Narration*

*2. Clarification.*

*3. Exhortation*

*4. Ethical and aesthetic conversation (interview).*

*5. Dispute*

a) a systematic and consistent discussion of knowledge. Teachers and students take part in the discussion, its subject is mostly moral and aesthetic problems.

b) a struggle of ideas, lively, heated discussions, held in the middle and high classes on political, economic, cultural,

aesthetic and legal topics. Beliefs collide, different opinions are compared.

c) it is related to requests, clarifications, and impressions, and its effect depends almost entirely on the form of the teacher's statement.

d) a method of influencing students verbally, emotionally, and the impact is directed to a group or individual.

e) an emotional talk, an interpretation of concrete facts and events.

**A) 1a; 2c; 3d; 4e; 5b    B) 1c; 2e; 3a; 4d; 5b    C) 1e; 2d; 3c; 4a; 5b**

**D) 1b; 2a; 3d; 4c; 5e                    E) 1d; 2c; 3b; 4e; 5a**

### **List of recommended literature**

#### **Chapter XVI**

1. Pedagogy and Practice: Culture and identities. Editors: Kathy Hall, Patricia Murphy, Janet Soler. SAGE, 2012, 232 p. <https://books.google.com/books/about/PedagogyandPractice.html?id=qkW0uPu61egC>

2. Yana Dolezalova, Jan Hubl, Kamil Janisch. Fundamental pedagogy. Hradec Kralove, 2014, Edition: first. 144 p. <http://inpdf.uhk.cz/wp-content/uploads/2014/03/FundamentalPedagogy.pdf>

3. Module 4: General pedagogy. [https://www.jica.go.jp/project/ghana/0604654/pdf/24Ghana\\_IN\\_SET\\_Sourcebook\\_M4.pdf](https://www.jica.go.jp/project/ghana/0604654/pdf/24Ghana_IN_SET_Sourcebook_M4.pdf)

4. Westbrook J. et.al., Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. Final Report. University of Sussex, Center for International Development. December 2013, 151 p. <https://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=XHbLcIohFq0%3D>

## CHAPTER XVII

### UPBRINGING WORK IN THE TRAINING PROCESS

#### *17.1. Intellectual upbringing work*

The development of the mind is a continuous process, and it happens both in training and in labor, as well as in the game and various life situations. But the most intensive development occurs when the knowledge is actively mastered and creatively applied. The well-developed mind is distinguished by the following features:

**1. The active attitude to the events in the surrounding world.** The active mind is not satisfied with what it knows and is eager to expand its knowledge on regular basis.

**2. The systematicity.** This means if the mind is systematic, it is disciplined as well. Thus, people with a disciplined mind can organize their activities properly and achieve good results.

**3. The volume.** The volume of the mind depends on its systematicity. It also relies on the developed memory.

The upbringing of the mind means the purposeful activity of teachers in order to develop the mental strength and thinking of students, to form their scientific worldview.

The development of the mind happens not only under the purposeful influence of teachers but also under the influence of the human environment.

Thus, intellectual development means the formation of the mental strength and worldview of students. Such development occurs as a result of all influences, as well as the purposeful influence of educators.

Intellectual upbringing is the main means of eliminating

the distinction between mental and physical labor for the comprehensive development of personality. Intellectual upbringing helps to increase productivity and approach to work creatively. There can be no rapid development of science and technology without extensive intellectual upbringing.

Thus, intellectual upbringing means to develop a person's mental strengths and abilities for intellectual activity, to form the ability of abstract thinking, carry out basic thinking operations, the capability to anticipate the beginning or outcome of events relying on intuition and results.

### ***17.2. Ethical upbringing work***

Ethical upbringing is a purposeful and systematic influence on the minds, feelings and behavior of students. The aim of this work is to form students' moral qualities in accordance with the requirements of public morality. The main objective of ethical upbringing is to form students' moral consciousness, to bring up and develop moral feelings, to form ethical behavioral skills and habits. The content of ethical upbringing includes: to acquaint students with the moral ideals and requirements of society; to prove their regularity and rationality; to transform ethical knowledge into ethical beliefs, to make a system of these beliefs; to form stable moral feelings and moral qualities, high behavioral culture and ethical habits.

Teachers should include information about human morality in the structure of upbringing work. They must explain that ***morality or ethics is a form of human consciousness, a part of human culture***. Understanding the norms, principles, and essence of morality enables students to

make ethical judgments. With their help, students evaluate the actions of both themselves and others. Ethical beliefs are formed on the basis of ethical concepts, values and judgments. Those beliefs also determine a person's behavior and actions. A person with moral persuasion deeply believes in the correctness of ethical norms and considers it necessary to fulfill them. When ethical knowledge is applied in life practice, it becomes a belief.

The main goal of ethical upbringing is the formation of *ethical behavior*. It is the actions of a person that characterize his attitude towards the being around him. But actions do not always give a complete picture of a person's moral education. Therefore, the formation of high moral motives for human behavior and action is an important and necessary part of ethical upbringing work.

The student must have a need for moral behavior. The formation of the moral needs of the personality is the process of assimilation and refinement of ethical norms and principles in the system of individual consciousness. With the help of moral needs, the foundation of morality itself is laid. The function of moral educative work is to develop the ability to make moral choices.

The system of actions leads to the formation of ethical habits, that is, to the emergence of stable needs for ethical actions. The advanced pedagogical experience accumulated in this field in recent years should be taken into account in the organization of ethical upbringing work:

1. Ethical upbringing must not be allowed to become an operation. Upbringing is a long, difficult process that arises from daily activities.
2. The moral qualities of a person are not formed without the need for them.
3. There should be as many good actions as possible that

can serve a person to reach a moral ideal. This is one of the golden rules for upbringing ethical qualities.

4. When designing the work on ethical upbringing, it is important to remember that several habits cannot be instilled at the same time. So it requires great nervous tension.

5. High ethical qualities are based on simple, elementary qualities. It is impossible to bring up such qualities as humanism, respect for people, kindness without creating the habits of cultural behavior as politeness, friendliness, communication skills, etc.

6. In order to bring up many moral qualities, such as collectivism, citizenship, conscious discipline, the following specific habits must be strongly mastered: taking care of others, sharing people's pain, stopping one's selfish passions, meeting the needs of the collective, fulfilling the obligations to people, taking responsibility for his, her own words and actions, and so on.

7. Speaking too loudly; interrupting others; chewing nails; playing arms and so on refer to negative habits. It is necessary to show children on the basis of concrete examples, that due to such seemingly insignificant habits at first glance, their future career and position in society may not be how they want.

### ***17.3. Aesthetic upbringing work***

The notion *aesthetic* is derived from the Greek word aesthetics, and means sensitive, sentient, pertaining to sense perception. The purpose of aesthetic upbringing work is to form an aesthetic attitude to life, labor, social activity, nature, art, behavior. The main objectives of aesthetic upbringing are to form aesthetic concepts, values, judgements, ideas, needs,

tastes, abilities. Mastering aesthetic culture is a criterion for being aesthetically brought up. Aesthetic culture, as a component of spiritual culture, means to distinguish beauty from ugliness, kindness from malice in work, life, art and behavior.

Aesthetic upbringing awakens and develops a sense of beauty. A person who pays attention to beauty needs to build his life according to the laws of beauty. Aesthetic upbringing is inextricably linked with ethical, mental, labor, physical upbringing. Love for nature, theatre, music, poetry, fine arts and other types of art play a stimulating role in comprehensive mental development.

Aesthetic upbringing is of great importance for the formation of morality. Aesthetic taste creates not only works of art, but also good deeds, honest work, loyalty to the team, collective.

The essence of aesthetic upbringing is to affirm kindness as beauty. It is impossible to achieve a high culture of work without developing a sense of beauty. Physical training includes many elements of beauty (good stature, gait, gentle and decisive actions). They enrich and make noble a person's life and behavior, his way of thinking.

One of the main categories of aesthetics is the category of beauty. Beauty is life, the fruit of human labor, human relations.

Aesthetic knowledge is formed in the process of performing specific upbringing work. These works include contests, quizzes, holidays, exhibitions, etc.

Psychological objective laws of aesthetic perception must be taken into account in the organization of aesthetic upbringing work. Aesthetic perception is specific to young children, and perception depends on their level of development, formation of aesthetic imagination. Therefore,

teachers should pay attention to the understanding of more complicated aesthetic events and forms, aesthetic problems by the students, taking into account their age characteristics.

Emotionality is an important component of aesthetic perception. Students experience feelings of joy or hatred, anxiety or hope when they perceive highly artistic works of art, that reflect the world around them. These feelings awaken the inclination and desire of students to live by the laws of beauty.

The diversity and variety of means of aesthetic upbringing create conditions for a wide range of artistic works.

Nature is the source of aesthetic upbringing. The upbringing work carried out in this regard has a great opportunity. Classical educators called nature a wonderful educator of the growing generation because nature has a profound effect on the development of their aesthetic feelings. Excursions, marches, the study of works of art which reflect the beauty of nature are traditional aesthetic upbringing works.

Labor training is the main type of work for schoolchildren. They need to develop the ability to see the beauty in creative work, to awaken the joy of participation in this work.

The modern pedagogical practice has gained extensive experience in organizing and conducting aesthetic upbringing work in various areas (artistic, literary, musical, etc.). Scenarios of effective upbringing work have been developed for all levels. Among them there are traditional general forms: contests, quizzes, lectures, school holidays, circles (study or hobby groups), creative associations, etc. occupy an important place.

#### ***17.4. Labor upbringing (training) work***

Labor upbringing (training) means that in the process of cognitive and labor activity, students acquire knowledge about labor and gain work experience. The family has a great opportunity to involve students in *self-service* and *domestic work*. Parents with their personal example, instill in their children a love for work. Children's and youth associations, pedagogical collectives involve schoolchildren in socially useful labor (community service). High school students participate in production work, which prepares them for practical activities.

The main way of labor training of schoolchildren is their participation in the types of work that correspond to their abilities. In any work, the power of the hand and the mind are organically combined.

When determining the content of labor upbringing, the level of development of the student body, the age characteristics of students, their interests and inclination are taken into account. Labor training implies the complication of types of labor from class to class.

The system of labor upbringing (training) of schoolchildren includes the following forms:

- labor upbringing in the training process;
- extracurricular circle's activities;
- extracurricular mass work;
- self-service work of students;
- socially useful labor;
- production labor of students.

All of these forms of labor have great upbringing opportunities.

*Training labor* is the main type of labor for schoolchildren. This requires great mental and volitional tension.

Training labor is more complicated and hard for many students than physical labor. Such students are impatient and unable to concentrate their attention for a long time. If students attend classes every day, are not late for classes, and perform their tasks on time and correctly, they learn to work systematically and in an organized way.

The peculiarity of the training labor is that the student does not see the results at that time. Cognitive labor is intellectual labor. It is true that at present physical labor (*classes in school workshosp, in school areas*) is included in school curricula, but the main budget for teaching time is intellectual labor.

The content and teaching methods of school education are aimed at the formation of students' honest attitudes to labor, people and public property.

Lessons of labor education or labor classes (now this subject is called Technology) are of special importance for labor upbringing. In labor classes, students acquire labor operations, working habits, as well as technical and technological knowledge, prepare things that are useful for themselves and others. In the training process, there are great opportunities to educate students to respect work and workers.

Self-service labor plays an important role in the system of labor upbringing of schoolchildren. By participating in self-service labor, students learn to evaluate the work of adults. Self-service labor continues not only at school but also at home (making the bed, cleaning clothes and shoes, washing and ironing clothes, cleaning the room, cooking, chopping wood, etc.). In some families, parents free their children from self-service work and what they can do, the parents do themselves. In such families, 'white hands' are grown up,

who are unable to work on their own or appreciate the work of others. The objective of school is to help parents involve their children in self-service labor according to their ability.

Involvement of students in *socially useful labor* begins in the primary grades. In primary grades, students take part in renovating their classrooms and planting trees and green grass in the schoolyard. Starting from the 5th grade, the socially useful labor of schoolchildren at school, especially in out-of-school activities expand. Student unions are usually the organizers of socially useful labor at school. Teachers and heads of the class involve not only class activists, but also the majority of students in their class to perform social tasks (regular and episodic assignments). In the process of socially useful labor, schoolchildren interact with the class and the school collective. In such labor, students' personal responsibility for their work, the quality of a creative approach to work get strengthened. Socially useful labor of schoolchildren helps to prepare them as active participants in building a new society.

#### ***17.5. Physical upbringing (training) work***

The theory of physical upbringing develops the content, means, methods and forms of physical upbringing (training).

The main concepts of the theory of physical upbringing are *physical perfection, physical upbringing, physical development, physical culture*.

The objectives of physical upbringing are determined by the care of society in the field of the health, comprehensive and harmonious development of personality.

The following **objectives are solved** in the process of physical upbringing. It:

- promotes proper physical development and strength of

the bodies of schoolchildren;

- creates an opportunity for the formation and improvement of natural motor skills and habits, teaches them knowledge related to new types of motor skills;

- develops basic motor qualities of students as strength, agility, speed;

- brings up a strong-willed, disciplined, courageous, brave, initiative young generation with high ethical qualities.

These tasks are resolved in unity and depend on the general goals of upbringing. In our country, physical upbringing is compulsory for the younger generation, beginning from pre-schools to universities.

Physical training at school forms students' independence, initiative and creative skills, organizational habits.

Physical exercises contribute to the harmonious development of the body, proper posture, graceful and gentle gait. Accompanying the relevant stages of physical training classes with music promotes the harmonious development of students' motions. Physical upbringing classes that are organized with pedagogical skills help students to form correct ideas about aesthetic taste, the beauty of man and creative work.

The content of physical upbringing at school includes the followings:

- 1) proper organization of students' training sessions, work and rest regime, creation of a special regime for schoolchildren belonging to a special medical group;

- 2) prevention from the formation of improper posture and deformity of it;

- 3) fulfillment of sanitary-hygienic requirements for the school building, its equipment, place of physical training (*stadium, gym, sports ground*);

4) teaching physical training and health work, motor skills, and development of motor qualities during the teaching day and school year.

There are four main means of physical upbringing: **gymnastics, games, tourism and sports**. Gymnastics, games, tourism and sports are carried out jointly in the system of physical upbringing. Although none of these tools is of universal importance, they have specific positive features. When they are used in a complex way, the child's comprehensive physical upbringing is provided.

**Gymnastics.** Both gymnastics and agonistics (*athletes' march*) were widespread in ancient Greece.

There are the following types of gymnastics:

- 1) basic gymnastics (*including hygienic gymnastics*);
- 2) gymnastics (*acrobatics and rhythmic gymnastics*);
- 3) auxiliary gymnastics (*industrial and therapeutic gymnastics*).

**Game.** Game plays an important role in children's conscious activity. Action games are widely used in physical training. Such games help to develop children's ethical and volitional qualities. It is known that every game has its own rules. Discipline and responsibility of children are formed as a result of observing these rules.

Games are chosen according to the age of the students. For younger students, imitation games with simple rules and independent creative elements are chosen. Many sport games are used in the physical training of children. Basketball, volleyball and handball games are mostly widespread.

Sports competitions are organized and held in out-of-class times.

**Tourism.** Different types of tourism are used in physical upbringing. Tourism is especially important for the patriotic upbringing of schoolchildren, strengthening their body and

endurance. Types of tourism, such as walking, excursions and tourist marches are used in physical upbringing.

Sport is a specific motor activity. The main goal is to gain high skills and records, to achieve high results. The specificity of sports activities is that the sportsman specializes here, makes maximum effort to achieve the best results in competitions. High sports results are achieved through regular long-term sports trainings.

Gymnastics, games, tourism and sports are used in all age groups of students. However, they are applied in different amounts at different ages.

Physical upbringing is closely linked to other components of upbringing (*labor, ethical, ecological, economic, etc.*).

#### ***1.7.6. Ecological upbringing work***

***Ecology*** is derived from the Greek word for house or environment and for study of it. ***Ecology*** is the scientific analysis and study of interactions among living organisms, including humans and their physical environment. ***Ecological upbringing*** means the formation of ecological or environmental culture in society. Ecological upbringing is purposeful, consistent, systematic work carried out by the teacher in the direction of formation of students' ecological consciousness and culture, their care and protection of nature. The objectives of ecological upbringing are to maintain the ecological balance in all places, to acquire knowledge, skills and habits to ensure environmental cleanliness and to apply them in practical activities. Effective organization of ecological upbringing requires the harmonious joint activities of the family, school and community. A school becomes burdened heavily. It must enlighten some families as well as

the students; even to the point where the family becomes a propagandist and a school helper. From this point of view, there are *challenges, that ecological upbringing faces*. They are:

**1. Paying attention to the state of the environment.** The family, kindergarten and school should participate in the performance of this task. A child's ecological knowledge, skills and habits begin in his or her bedroom, apartment, building, street, kindergarten, schoolyard and desk. Therefore, at an early age, and according to their level of understanding children's attention should be focused on the environment regularly. This will help them to see whether the living conditions, including the house, yard, street, village, city, classroom are clean or dirty, and to decide for themselves which situation is good and which is unbearable. For example, when parents tidy up the house, yard, or garden, it is better to draw children's attention to neatness and untidiness. It would also be good if parents criticize untidy people for dumping their garbage anywhere they want and praise the place where they live and its surroundings for being clean, tidy, and flowery. If children's attention is focused in this direction, the foundation of ecological upbringing will be laid. If the same work is continued in kindergarten and school, it'll have a complex effect on the minds and consciousness of children. Referring to the theory of cognition, we can say that this is the first stage: *the stage of live observation*.

**2. Understanding the harmful effects of environmental pollution.** At this stage, it should be explained to children that, cutting down trees, dumping their garbage anywhere they want, shedding unclean water into living places, gardens, burning garbages, and improper use of chemically manufactured household appliances are the vital facts of the

defects they observe. According to the theory of cognition, this is a *stage of abstract thinking* and arises through the explanation, conversations, and connection with life by the educator.

**3. Creating the will to fight against those who harm the environment and the spirit of protecting and further developing the environment.** At this stage, children and young people must develop a sense of intolerance towards people, who harm the environment by demonstrating a lack of culture and moral imperfection. And they must master the ability to normalize, beautify and protect the environment. This is the *experimental stage* of cognitive theory.

The tasks to be performed in all three stages can be briefly characterized as follows:

- to form ecological consciousness of the growing generation;
- to instill in children and youth a love and care for nature, the environment, feelings of intolerance against its deterioration;
- to form the necessary skills and habits on nature protection, to prepare the young generation for active ecological activity;
- to form in the minds and activities of schoolchildren an economical approach to natural reserves and material resources;
- to accustom them to perform the economic tasks honestly;
- to involve the younger generation in nature protection.

Children's cleanliness, participation in socially useful and productive work, involvement in cultural activities of flora and fauna in the environment, annual planting of greenery, labor in the cultivation of agricultural products and other

activities are important in their environmental upbringing. Also, the development of students' theoretical knowledge and practical work skills in the field of ecology can form their sense of social responsibility.

Ecological upbringing can be conducted in two main ways – in the training process and through extracurricular and out-of-school activities. There are many types of extracurricular and out-of-school activities, and each of them can be used expediently.

### ***1.7.7. Economic upbringing work***

The word *economics* originates from the Greek work *oikonomikos*, *oikos* for home, and *nomos*, for management. Thus, economics means ***home management***. It is the study of how mankind organizes itself to tackle the basic problems of scarcity. All societies have more wants than resources. Hence, a system must be devised to allocate these resources between competing ends. Economy means the production, distribution, exchange and consumption of material goods in the country. Economic upbringing means the formation of economic consciousness and economic culture of the younger generation, the development of skills and habits related to good management.

The objective of economic upbringing is to instill economic qualities in the younger generation. Economic notions include *entrepreneurship, good management, thriftiness, wastefulness, budget, family budget, exchange, money, profit, income, debt, expense, productivity, market, price, competition, economic crisis, concern for the people's property and material and spiritual wealth created by others*, etc. When the meaning and opportunities of these concepts are inculcated in the growing generation, and when

knowledge, skills and habits are imparted in those areas economic upbringing is obtained.

The objectives of economic upbringing can be characterized as follows:

- 1) to form the economic consciousness of students through the transfer of economic knowledge;
- 2) to form an idea about the economic objective laws of development;
- 3) to form the desire to approach material resources economically;
- 4) to inculcate entrepreneur-collectivist qualities, good management skills;
- 5) to achieve the assimilation of economic culture by each student;
- 6) to foster a caring attitude to public property, including the property of educational institutions;
- 7) to form the ability to correctly understand the economic policy of the country;
- 8) to form ideas about the role of the economy in family life and the development of society.

As in other fields of upbringing, economic upbringing begins in the family, continues at all levels of general education (provided at school), as well as in extracurricular activities. Experienced parents prepare their children for life on economic upbringing. Sometimes the family budget is discussed and exchanged between family members in such a way that children become aware of the situation, too. They have preliminary notions about thriftiness, making no way for wastefulness, appreciating material blessings, and economic prosperity that goes through the labor process. The work on economic upbringing in the family continues at school on scientific basis. Of course, the economic upbringing work

carried out in the educational institution also refers to the work carried out in families and the concepts given there. Starting from the first grade, students gradually become acquainted with notions as *shortage, unemployment, market, money, price, exchange*, and so on. These concepts are repeated (revised) and consolidated in the middle and upper classes in different relationships. At the same time, in grades 5-6, they learn new concepts, such as *productivity, competition, market economy*. These concepts too, are repeated in the next classes. In grades 7-8, students get information about new concepts such as *supply and demand, income distribution, and gross national product*.

Finally, in high classes, they learn complex concepts such as *inflation, deflation* (reduction of the amount of paper money in circulation), *fiscal policy, economic growth, economic stability*, and so on. These concepts are to be repeated. Thus, the economic upbringing of the younger generation is formed on the basis of basic economic ideas and concepts. This happens in the process of teaching subjects, and organizing and conducting extracurricular activities.

#### ***1.7.8. Legal upbringing work***

The Constitution of the Republic of Azerbaijan provides citizens with *the right to education, the right to life, the right to rest, the right to work, the right to housing inviolability, the right to citizenship, the right to health, the right to choose, the right to be elected, the right to freedom, the right to property, the right to equality, the right to use the native language, the right to protection of honor and dignity* and other rights. This means that the law and its roots are determined by the state. Compliance with these norms is obligatory. Violations of the norms are punished by the state.

This reality should be well known and remembered by each of us, including the younger generation. Therefore, the legal upbringing of the younger generation is important.

Legal upbringing implies that the young generation should know their rights and responsibilities, use them, fulfill their responsibilities, comply with the requirements of the law, respect the rules of society. **Legal upbringing** also means *the formation of legal consciousness and legal culture, respect for the law, intolerance to anti-social attitudes on the basis of organized, constant, purposeful and planned influence on the personality of the student.*

The rights, freedoms and responsibilities stipulated by the Constitution of the Republic of Azerbaijan constitute the content of legal upbringing.

The main responsibilities of citizens include: *loyalty to the motherland, respect for state symbols, defense of the homeland, protection of historical and cultural monuments, protection of the environment, payment of taxes and other state duties, prevention of illegal activities, responsibility, etc.*

The legal upbringing of the younger generation should start from the family. Parents should set an example for their children by respecting the law. Then legal upbringing should be continued in kindergarten and at school.

The **objectives** of legal upbringing are as follows:

1) formation of understanding of law and legal norms of the younger generation. Explaining to them their rights as well as their responsibilities;

2) coming to a resolute and thorough conclusion about the necessity and vital importance of constant compliance of legal norms, both within the school and in the society;

3) building trust in the rule of law and fostering intolerance against violations of the legality;

4) explaining to students the functions of law enforcement officers and instilling in them the sense of respect for those persons and their work;

5) acquainting students with the knowledge of family law, legislation on marriage, preparing them for family life.

As some citizens do not know their rights, their rights are sometimes violated and they are deceived. However, those who have an understanding of the law, have the opportunity to claim their rights. It must not be forgotten, that the state declares this or that right, and also determines the appropriate responsibilities. For example, everyone has the right to education in our country, regardless of nationality, gender or social status. However, in addition to exercising this right, a citizen must know his responsibilities. He is obliged to comply with the rules of internal discipline of the institution where he studies, to attend classes regularly, to study successfully.

Extracurricular activities are also of great importance in legal upbringing. They are diverse; this includes individual cases with legal upbringing opportunities, as well as the works carried out in groups and mass work. This also includes the events held jointly with relevant out-of-school educational institutions.

It is important to use various forms of legal upbringing at school throughout the school year.

### ***17.9. The essence of socially oriented work***

Upbringing work aimed at inculcating socially significant qualities is conventionally called socially oriented work. It is conventionally called so because the purpose of any upbringing work is complex. The main goal of such upbringing work is to teach students the system of social

relationships, i.e. society, public authorities, public order and other relationships. In modern conditions, the position of citizenship is of great importance among the social qualities of personality. Discipline, another social and moral quality of a personality, is indissolubly linked with the quality of citizenship. Students gradually begin to master social relations, and this happens through discipline. Discipline manifests itself in the behavior, actions of a person, and in the conscious observance of norms and rules of social behavior. Discipline, tenacity, perseverance, decisiveness require self-control. Discipline is based on will. Discipline also combines moral qualities, such as politeness, attentiveness, internal discipline and self-discipline, which are essential in communicating with people around. The inculcation of useful habits and the development of will, bring up discipline in a person. In this case, in addition to the observation of external discipline, it's important to strengthen the student's inner confidence about the necessity of generally accepted rules of behavior.

The main way of inculcating conscious discipline is to organize socially oriented upbringing work. The main goal of this work is to accustom the students to follow the rules of conduct, to observe the mode of life and activity, and certain rules of discipline. For this purpose, rules of conduct are defined in each educational institution. These rules, on the one hand, reflect the ethical principles of the society, on the other hand, they reflect the peculiarity of the work of the educational institution. Rules of conduct reveal the meaning of disciplinary requirements and their importance. Thus, the Rules for students and Rules of internal discipline require students to keep classrooms clean and tidy, to be kind to their peers, to be polite to adults, and to be honest in their duties.

The social activity of a personality implies a critical attitude to everything in life. Such a person is inclined to regular independent analysis of events in the country and in the world, and to beautify life. A passive life position does not mean inaction. A diligent student who gets excellent marks, and a school principal who willingly follows all instructions can also take such a position. The essence of a passive position is to be afraid of innovation, to turn to old stereotypes of thinking, to refuse to take initiative. Passive position can also manifest itself in a positive attitude towards progressive innovation. This happens when instructions are given by the authorities to apply these innovations.

Family takes the first place among the most important social factors, that influence the formation of a person's life position. Students who are not socially active usually live in families, where parents think only of children's doing their lessons well. Such families direct their children to perform easy social tasks.

Socially oriented upbringing work creates the necessary conditions for the formation of students' life positions.

#### ***17.10. Upbringing work in the family***

Theoretical and technological foundations of family upbringing, concepts related to family upbringing have not changed externally in different historical periods and social structures. These concepts include the formation of universal values, such as honesty and honor, dignity and kindness, love for people, diligence, and the ability to be grateful for kindness. Traditionally, great attention is paid to the upbringing of children in all families. There is no beginning and no end to the upbringing process in the family. Parents are ideal for children.

Depending on the number of children, modern families are families with many children, families with few children, families with one child, and childless families. According to their composition, these families can be one-generation (only spouses, i.e., husband and wife), two-generation (parents and children), and inter-generational (children, their parents, grandparents) families. If there is only one of the parents (father or mother) in the family, such a family is considered an incomplete family. If a woman gives birth to and raises a child (out of wedlock), such a family is considered a type of incomplete family.

In pedagogy, families are classified not only by their composition but also by the character of the relationship: ideal families, middle families, negative (scandalous, nervous) families. Sociologists have identified the following types of families: harmonious family, disintegrating family, broken family, incomplete family. Practical pedagogues divide families into two groups (successful families, unsuccessful families).

Family upbringing is based on family law. This right is enshrined in the country's constitution, legislative and normative documents on marriage, family and the rights of the child. The International Convention on the Rights of the Child, adopted by the United Nations in 1989, is one of the documents that guarantee the life and health of children. In accordance with this convention, parents must respect the freedom and dignity of their children and create conditions for their growth in the family as personalities and citizens.

Parents should be aware of the provisions of the Convention on the Right of the Child to Life. It is also important for them to know the three principles of implementation of the Convention:

- 1) to assimilate the main provisions of the Convention;
- 2) to know the rights enshrined in the Convention;
- 3) to promote the implementation of concrete measures and actions to make these rights and provisions a reality.

The foundation of personality is laid in the family, which is a structural unit of society. The family is linked by blood and kinship.

The marriage of two persons does not mean the formation of a full family. The formation and strengthening of a complete family are associated with the birth of children. The function of the family is to bear children and to ensure the development of the human race. Therefore, ensuring family education, its content and organizational aspects is one of the eternal and very responsible functions of mankind.

The purpose of family upbringing is to form such qualities of personality that will help to overcome difficulties and obstacles. Life is full of unexpected events, surprises. The development of a child's intellectual and creative abilities, cognitive powers and the experience gained in the initial labor activity, ethical and aesthetic experience, emotional culture and physical health depend on the family and parents. All of these are the main goal of family upbringing.

After showing the known upbringing functions of the family, the following conclusions can be drawn:

1. The upbringing influence of the family on the child is stronger than all other educative effects. As the child grows up, this effect weakens and sometimes disappears altogether.
2. Such qualities are formed in the family, so it is difficult to form them outside the family.
3. The family carries out the process of socialization of the personality. This is a generalized expression of the family's efforts for the physical, ethical, and labor upbringing

of the child. Members of society come from families: just as the family is, so is society.

4. The family ensures the inheritance of traditions.

5. The important social function of the family is to bring up a citizen, a patriot, a future head of the family, a law-abiding member of society.

6. The family has a significant impact on a child's choice of profession.

Most modern families spend most of their energy and time on the material well-being of the family, not on the spiritual formation and development of children. According to sociological research, a working woman spends 16 minutes a day and 30 minutes on Sundays on raising children. Spiritual communication of parents with children, their joint work is a rarity in many families. Communication of parents with children is limited to control the child's attendance at school and doing homework.

The reasons that most negatively affect the upbringing of children in the family are:

**1. Low economic level of the majority of hardworking families.** In such families, parents spend most of their time earning a living.

**2. Low cultural level of public life.** Dual morality, social tension, disbelief to the future, fear of losing a job, fear of getting sick and other reasons lead people to high nervous tension and stress.

**3. Double burden of a woman in the family, her working both at work and in the family.** Studies show that the weekly workload of urban women in families with children is 77 hours, including 36 hours at home. A mother's average working day, including Sundays, is 11 hours.

**4. Increasing divorce rates.** This is due to a variety of

social and moral reasons. Divorce always causes problems in bringing up children.

**5. Emergence of conflicts between generations.** This is becoming intensified day by day. There are reports about murders in the family.

**6. Weakening of ties between family and school.** For the present, neither secondary school nor new social institutions can provide effective assistance to the family.

The number of families is equal to the features of upbringing. Despite these differences, typical models in the relationship between adults and children in families can be distinguished.

**1. Families who love children.**

**2. Sensitive, careful families.**

**3. Material-oriented families.**

**4. Enemy families**

**5. Antisocial families.**

In pedagogy, family upbringing is a system for managing the relationship between parents and children. The relationship between parents and children is always educative.

In modern family upbringing practice, there are three main styles of parental attitude towards their children:

**1. The authoritarian style** of parents in their relations with children is characterized by their seriousness, exactingness, decisiveness. Threats, harassment, and coercion are the main means of this style. This style makes children feel scared and insecure. According to psychologists, such situation leads to internal resistance, which manifests itself in rudeness, mendacity and hypocrisy. The demands of the parents create in the child either protest and aggression, or the usual sluggishness and passivity.

**2. Democratic style** is characterized by the agility of

parents. Parents listen to their children's opinions, respect their position, and develop their free judgment. As a result, children understand their parents well and grow up as a person, who is clever, polite, initiative and with a developed sense of personal dignity. Children see in their parents an example of citizenship, diligence, purity.

**3. Negligent style** is characterized by forgiveness and tolerance in dealing with children. This style is based on excessive love for the child. As a result, children grow up undisciplined and irresponsible.

The methods of bringing up children in the family do not differ from the general methods of education.

Family upbringing methods are inseparable from the personality of the parents.

### ***17.11. Pedagogical assistance to the family***

School and family play a leading role in the implementation of public upbringing. In order to coordinate the activities of the school, family and community in upbringing of children, school carries out its work in the following organizational forms:

1. Coordinates the upbringing work plans of the pedagogical staff of the school, the parent's committee, public councils, clubs, libraries, stadiums, police, health authorities in the inhabited places, accurately distributes the functions of each participant of the upbringing process.

2. School, on its strength, systematically trains parents and community members on the most effective ways to work with children.

3. Carefully studies and discusses the course and results of upbringing work, identifies the causes of shortcomings, and takes joint measures to eliminate them.

School holds the main work with parents through parent's associations. These associations include parent committees, councils, Parent Teacher Associations, aid societies, commissions, clubs, and so on.

One of the main tasks of parent's associations is to disseminate pedagogical knowledge. Lectures, parental universities, round tables, conferences, parents' schools, and many other regular and one-time forms of pedagogical education help parents.

Parents' school is established to study general ethical, aesthetic, volitional and intellectual values. School activists try to convince parents of the need to learn the basics of humanistic relations and cooperation. Encouraging parents to improve their skills, teaching them the practical foundations of proper parenting (upbringing) of children in the family should be the main goal and result of a parents' school.

Most parents want to see their children talented and cultured, well-brought-up. On the basis of this natural desire of parents, a relationship between school and family is established. Linking school and family efforts mean creating the same nurturing and developing environment.

Modern family upbringing is based on a number of requirements. These are:

- 1) to give the child the opportunity to freely develop his, her abilities;
- 2) to recognize the personality as a value;
- 3) to establish equal moral relations between adults and children on the bases of democracy;
- 4) the principle of citizenship, i.e. the child's perception of I in the social-state system;
- 5) to use the educational traditions of the people in upbringing work;
- 6) the supremacy of universal ethical norms and values.

**17.12. The work of the head of the class with family**

The burden of establishing a real connection with the family falls on the head of the class, i.e., form master. He or she organizes activities through the class parent's committee, parent's meetings, as well as teachers working in his or her class. An important part of practical activity of the head of the class on establishing contact with the family is regular students' home visits. During these visits, children's living conditions are studied on the spot, and measures are agreed and coordinated to strengthen the joint upbringing effect on students. Head of the class also provides pedagogical advice to families.

It would be useful to give lectures and talks about tasks, forms and methods of family upbringing in parent's lectures, physiological features of children of the same age, different directions of upbringing (*ethical, aesthetic, physical, labor, intellectual, economic, ecological, legal, etc.*).

It is necessary to inform parents about the results of student attendance and progress, discipline, the facts of lagging behind in learning, as well as to research the reasons, to discuss ways to eliminate negative situations, to determine specific measures in parent's meetings. It is unacceptable to turn parent's meetings into reminders, reprimands and reproaches. Student and his family should not be embarrassed in front of people. It is strictly forbidden for a teacher to take on the role of a judge, to make final decisions and to judge. A humanist teacher has no right to reprimand or judge. Because he or she understands that the reasons which lead his students to do this or that are very complicated and contradictory. In such cases, the head of the class must be patient, compassionate, sympathetic, and support his or her disciples.

His advice to parents should be gentle, measured, and kind.

The issue of observing the unity in the requirements of the family and the school is regularly discussed in parent's meetings, and ways to resolve existing differences, i.e. divergence of opinions are identified.

Inviting parents to school for a conversation is one of the traditional forms of work of the head of the class, form master. Schools with a humanistic orientation invite parents to school to inform them about their students' achievements and to agree on a program for further development of their talents. In authoritarian schools, the reason is always the same: dissatisfaction with the child's level of mastery and behavior. Research shows that inviting parents to school for these reasons causes them to get negative emotions, which discourages parents and children from school. Many schools have created a rule: each parent must attend school one day a week. In this case, parents accept the admonition as normal, and the remarks do not cause a sharp reaction. The school helps parents to systematically engage in upbringing of their children in this form. The head of the class has to meet with 4-5 parents every day, and such meetings are very useful. Parents' school attendance has a stimulating effect on students.

***Check yourself.***

**1. Distinguishing features of the well-developed mind are:**

- A) active attitude to the events in the surrounding world.
  - B) systematicity.
  - C) active attitude to the events in the surrounding world; systematicity; volume.
  - D) volume.
  - E) systematicity; volume.
- A) B) C) D) E)**

**2. Match the types of upbringing to the related statements.**

1. *Intellectual upbringing*

2. *Ethical upbringing*

3. *Aesthetic upbringing*

4. *Labor upbringing (training)*

a) the purpose of this work is to form an aesthetic attitude to life, labour, social activity, nature, art, behavior.

b) a purposeful activity of teachers to develop the mental strength and thinking of students, to form their scientific worldview.

c) in the process of this activity students acquire knowledge about labor and gain work experience.

d) the purposeful and systematic influence on the minds, feelings and behavior of students.

**A) 1b; 2d; 3a; 4c B) 1a; 2b; 3c; 4d C) 1d; 2c; 3a; 4b**

**D) 1b; 2c; 3d; 4a E) 1c; 2b; 3d; 4a**

**3. Match the types of upbringing to the related statements.**

1. *Physical upbringing*

2. *Ecological upbringing*

3. *Economic upbringing*

4. *Legal upbringing*

a) the main concepts of its theory are physical perfection, physical upbringing, physical development, physical culture.

b) the purposeful, consistent, systematic work carried out by the teacher in the direction of formation of students' ecological consciousness and culture.

c) formation of legal consciousness and legal culture, respect for the law, intolerance to anti-social attitudes on the basis of

organized, constant, purposeful and planned influence on the personality of the student.

d) formation of economic consciousness and economic culture of the younger generation, the development of skills and habits related to good management.

**A) 1b; 2d; 3a; 4c   B) 1a; 2b; 3d; 4c   C) 1d; 2c; 3a; 4b  
D) 1b; 2c; 3d; 4a   E) 1c; 2b; 3d; 4a**

**4. Define the wrong statement for socially-oriented work.**

A) It is aimed at inculcating socially significant qualities.

B) Its main goal is to teach students the system of social relationships.

C) Students gradually begin to master social relationships.

D) Discipline does not manifest itself in the behavior.

E) Discipline is indissolubly linked with the quality of citizenship.

**A)   B)   C)   D)   E)**

**5. Define the correct line of typical family models.**

A) families who love children; antisocial families; sensitive, careful families.

B) sensitive, careful families; enemy families; families who love children.

C) material-oriented families; families who love children; enemy families.

D) enemy families; sensitive, careful families; antisocial families; material-oriented families.

E) families who love children; sensitive, careful families; material-oriented families; enemy families; antisocial families.

**A)   B)   C)   D)   E)**

**List of recommended literature**  
**Chapter XVII**

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## CHAPTER XVIII

### SCHOOL MANAGEMENT AND LEADERSHIP

#### *18.1. The essence and basic principles of management of pedagogical systems*

The notion of management is one of the most general and universal notions. Management means the activity aimed at making expedient decisions, organizing, monitoring and regulating the object that is managed, analysis of the issue on the basis of the correct information and its conclusion.

General secondary school, which is a complex, dynamic social system, is the object of intra-school management. Intra-school management is a purposeful, conscious interaction of the participants of the entire pedagogical process to achieve optimal results. Interaction of participants in the entire pedagogical process arises from the following consistent, interrelated activities: *analysis of work, goal and planning of work, organization of work, controlling it, regulation and correction.*

The theory of school management is significantly complemented by the theory of intra-school management. The activity of a school director (who manages school) is based on the respect and trust in employees and creating conditions for them to succeed at work.

The essence of management is fully and comprehensively reflected in the following principles:

- 1) cooperation between colleagues with unified management;
- 2) coordination of state and public bases in management;

- 3) unbreakable interaction of science, theory and practice in management;
- 4) planning in management;
- 5) systematicity and complexity in management;
- 6) tendency to achieve efficiency, final results in management;
- 7) rational coordination of centralization and decentralization in management;
- 8) democratization and humanization in management.

The principles of management are the concrete manifestation and reflection of the regularities of management.

Experts included in the list of main regularities of intra-school management the followings:

- 1) the dependence of the effectiveness of the management system on the level of structural and functional relations between the subject and the object of management;
- 2) the dependence of the content and methods of management of educational work on the nature of the content and methods of organization of the pedagogical process at school;
- 3) the dependence of analytical, purposeful, humanistic and democratic nature of management on the readiness of school leaders for various types of management activities.

One of the features of modern education systems is transition from state administration *to state and public administration*. The main idea of state and public administration of education is to unite the efforts of the state and society to solve educational problems, to give teachers, students and parents great rights and freedoms to choose the content, forms and methods of the educational process, different types of educational institutions.

The state character of the education system means that the country pursues a united education policy. According to the Law on Education, education is a priority area in the Republic of Azerbaijan. Priority means that the country's social and economic, political, cultural and international success is connected with the education system.

The state character of the management of the education system is enshrined in the principles of state policy in the field of education. These principles are expressed in the Law on Education of the Republic of Azerbaijan: the humanistic character of education, the secular character of education, the right of everyone to education, the democratic, state-public character of education, etc.

Appropriate state bodies are established in the country for education management, in order to consistently implement the state policy in the field of education.

School is a pedagogical system and an object of scientific management. This includes creating conditions for organizers of education, leaders, teachers, students to define their goals and achieve results, to choose the content, to use various means, forms and methods in the educational work. In this case, management maintains the expediency of the pedagogical system and the opportunity to effectively influence the renovation of the components that make up this system.

Interaction of teachers and students is an important factor in the pedagogical system. The goal of school is to form the basis of the cultural development of the personality. This base combines the intellectual, ethical, aesthetic, labor, ecological, legal and other cultural aspects of personality. The general goal is concretized in separate directions on educational work.

The result is a set of more stable and real criteria that determine the level of courteousness of both separate students and groups of students in general.

There are at least two groups of conditions in school management: general and specific. General conditions include: social, economic, cultural, national, geographical conditions. Specific conditions include characteristics of the social-demographic composition of students, location of the school (city, village), capabilities of the material and technical base of the school, upbringing opportunities of the environment.

The character of the ethical and psychological environment in pedagogical and student groups, the cultural level of students' parents is one of the important indicators of the effectiveness of the pedagogical process.

Pedagogical system has structural components. One of the main components is the activity of the pedagogical staff and leaders.

There are four levels of management in the structure of the school management system:

**The first level** includes school directors, selected by the state body or collective, heads of school councils, student's committees, public organizations. This level determines the strategic directions of school development.

**The second level** includes assistants of school directors, school psychologist, social pedagogue, a person responsible for the organization of socially useful works, assistant director for administrative and economic work, and also bodies and unions involved in self-government.

**The third level** includes teachers, upbringers, heads of the classes (they perform appropriate management functions

in relation to students and parents, children's unions and circles).

**The fourth level** includes students, class and high school students' self-government.

The hierarchical scheme above shows that each lower-level subject of management is the object of management for higher-level management.

### ***18.2. The main functions of management***

The school director's management culture is a part of the director's professional and pedagogical culture. In recent years, psychological-pedagogical research are conducted in the field of pedagogical culture. The meaning of pedagogical culture is revealed in the categories of pedagogical values, pedagogical technology and pedagogical creativity.

The management culture of school directors is manifested in various types of management activities, in mastering, transmitting and creating values and technologies in school management. In this sense, the management culture includes axiological, technological and personality-creative components.

Knowledge, ideas and concepts that are of great importance for effective school management are pedagogical values. Management values of pedagogical systems are different. They can be the followings:

**1. Values-goals.** They reveal the importance and meaning of the goal of the management of the entire pedagogical process at different levels of the hierarchy. These goals include the goal of management of the education system, the goal of school management, the goal of pedagogical and student collective management, the goal of management of self-education and self-development of the personality, etc. Values-goals are special regulator of managerial activity;

**2. Values-knowledge.** They reveal the importance and meaning of knowledge in the field of management. This includes the knowledge of the methodological bases of management, intra-school leadership, effective criteria for managing the pedagogical process, etc;

**3.Values-relationships.** They reveal the importance of interaction among the participants of the pedagogical process, attitude to themselves, attitude to their professional activity, interpersonal relationships in pedagogical and student collectives, purposeful formation and management of these collectives;

**4.Values-qualities.** They reveal different individual, communicative, behavioral qualities of school director, who is the subject of management. These qualities reflect the special abilities: the ability to predict the school director's activities and anticipate their results; the ability to relate the school director's goals and actions to the goals and actions of others; ability to cooperate and manage together, etc.

The technological component of school director's management culture unites the rules and techniques of management. The technology of intra-school management is aimed at solving specific pedagogical tasks. The solution of these tasks is based on the skills of the leader in the field of analysis and planning, organization, control and regulation of the pedagogical process. The level of management culture of principal depends on the level of proficiency in the ways and rules for solving the above-mentioned types of tasks.

The personality-creativity component reveals the management culture of school director as a creative act. Despite the fact that management is algorithmic in nature (algorithms are instructions that clearly define the sequence of operations to solve the same type of problems), the activity

of school director is a creative activity. Because school director acquires management values and technologies, updates and interprets them. School director realizes himself or herself as a personality, as a leader, as an organizer and educator in the management activity.

The functional duties of the heads of educational institutions are determined by the charter of the general education school or other educational institution. Directors and their assistants manage educational institution. Director plays a key role in the management of the educational (education and upbringing) process.

Director of the general educational institution performs the following functional duties:

1) plans and organizes the educational process, monitors its process and results, is responsible for the quality and efficiency of the work of the educational institution;

2) represents the interests of the educational institution in the state and public bodies;

3) creates necessary conditions for the organization of extracurricular and out-of-school activities;

4) selects assistants, determines their functional duties, places the pedagogical staff of the educational institution;

5) hires and dismisses pedagogical, administrative, educational (teaching-upbringing) and service staff of the educational institution;

6) organizes the rational use of budgetary funds allocated to an educational institution in accordance with the established procedure;

7) offers necessary facilities to apply advanced forms and methods of teaching, to conduct pedagogical experiments for the creative development of the pedagogical staff of educational institutions;

8) is responsible for activities before the relevant authorities.

Issues related to student self-government, career guidance, and work with parents are in the center of the attention of school director.

Assistants of school director are responsible for the various areas of work at school. These positions are director's assistant for the educational work, organizer of extracurricular and out-of-school activities, director's assistant for scientific-research work (in some schools this position is established), director's assistant for deep learning classes of various subjects, director assistant for the economic work.

The director's assistant on teaching and upbringing work is responsible for the organization of the pedagogical process, the implementation of educational programs and state educational standards; monitors the quality of students' knowledge and their behavior; regulates the teaching load of teachers and students; compiles the schedule of the lessons; supervises methodical work, application of pedagogical innovations at school; stimulates teachers to improve their pedagogical culture.

The functions of the assistants of school director are defined in the school's charter. In this document, educational work is based on the division of functional tasks among several deputies.

The effectiveness of the school director's management activity depends on the proper distribution of rights and responsibilities in the school administration. If necessary, school directors hold instructive and operational consultations and meetings of the pedagogical council.

The issue of management methods is closely connected to the issue of work style. Style is a set of methods that are more

typical for a person to solve certain tasks and problems that arise in the process of managerial activity.

Specialists in the field of management theory and social psychology distinguish three main styles of leadership: 1) authoritarian style; 2) negligent style; 3) democratic style. Of course, each of these styles is rarely found in its pure form. In practice, there are many shades of them, but every leader tends to one style or another.

**Authoritarian style** is primarily based on the widespread use of administrative methods. An autocratic leader makes decisions on their own, without taking into account the opinions of public organizations and subordinates. The leader has high hopes for the orders and tries to gather all the power in his or her hands.

The trend to autocratic methods often leads to voluntarism (considering the human will as the main factor), bureaucracy (procrastination), and making unreasonable decisions.

There are situations, where the application of autocratic methods as a temporary measure is justified. It is necessary to take decisive and urgent measures to eliminate the existing deficiencies. The elements of the authoritarian style are that they slow down the initiative and creative pursuits, so that they can be applied to a limited area of educational guidance.

**Negligent style** is characterized by the lack of purposeful and effective management system. A leader with a negligent style is usually afraid of responsibility for the decisions the leader makes, trying to hide behind a wide veil of collegiality. The leader is not able to demonstrate the necessary principles and demands and often refuses previously made decisions. A negligent style manager can seriously damage the work and ruin the work of the school.

**Democratic style** is the most favorable style in the management system. This approach properly coordinates

collegiality with a unified leadership, and means the active participation of public organizations and all teachers in decision-making related to school management.

The main functions of management include analysis and planning, organization and control, coordination and stimulation.

### ***18.3. Pedagogical analysis in intra-school management***

Pedagogical analysis is one of the functions of managing the entire pedagogical process. Pedagogical analysis has a special place in the structure of the management cycle. Any management cycle, consisting of coherent and interrelated functions, begins and ends with pedagogical analysis.

The effectiveness of managerial and pedagogical activity depends on the mastery of the methods of pedagogical analysis by school directors and teachers. Untimely and unskilled analysis of school director's work leads to inaccuracies in the determination of goals and objectives and even to unreasonable, ungrounded decisions. Ignorance of the real state of works in the pedagogical or student collective makes difficulties in establishing a proper system of relationships in the process of regulating and correcting the pedagogical process.

The main goal of pedagogical analysis is to study the state and development trends of the pedagogical process, to assess its results objectively, and on this basis to develop recommendations for regulating the management system. This function is one of the most difficult functions in the structure of the management cycle. The analysis means the division of the object under study, evaluation of the role and

location of each part, unification of parts into a single whole, building relationships among the parts that create the system.

Unlike other management functions, such as planning or organizing functions, the pedagogical analysis function seems to be less effective. In fact, it requires a person to have maximum intellectual tension, analytical mind (thinking) that is formed to compare, generalize, systematize, synthesize pedagogical facts and events.

In the theory and practice of school management the following main types of pedagogical analysis have been identified: *parametric analysis* (a parameter is a quantity indicating a particular property of an event), *thematic analysis*, *final analysis*.

**Parametric analysis** is aimed at obtaining daily information about the progress and results of the educational process, making known the reasons that hinder the process. According to the results of the parametric analysis, adjustments and changes are made to regulate the course (progress) of the entire pedagogical process. Current student performance, discipline in classes and school during the day and week, attendance at classes and extracurricular activities, sanitary condition of school, adherence to class schedules, and other issues are *the subject of parametric analysis*.

Visits to classes and extracurricular activities by school directors and assistants are *the main content of their parametric analysis*. Recording the results of parametric analysis, systematizing and processing them, create conditions for thematic pedagogical analysis.

**Thematic analysis** implies the study of more stable, recurring dependencies of the pedagogical process and its consequences. A systematic approach to the study of classroom and extracurricular activities is more evident in the content of thematic analysis. If the subject of parametric

analysis can be a separate lesson or an extracurricular activity, then the subject of thematic analysis can be a system of lessons and extracurricular activities. The director or assistant can get a complete picture of the teacher's work system only after analyzing a few lessons and classes.

The content of thematic analysis consists of the following complex problems: *the optimal combination of teaching methods, the formation of students' knowledge system, the system of work of ethical, aesthetic, physical, intellectual education of teachers and heads of the class; the system of teacher's work to improve pedagogical culture; activity of pedagogical collective on the formation of innovative environment at school, etc.*

Relying on the data of the parametric analysis, school directors prepare and substantiate the content and technology of the final analysis in the course of analytical work.

**Final analysis** is conducted at the end of the semester, in the middle and at the end of the school year. Its aim is to examine the main results and the reasons for achieving them. The final analysis creates the conditions for the implementation of all management functions. Information on the final analysis include the information on parametric and thematic analysis, quarterly, semi-annual inspections, official reports submitted by teachers, heads of the class, representatives of the administration, public organizations, references.

Thus, the main objects of pedagogical analysis are the forms of organization of teaching, this is, first of all, a lesson. And extracurricular activities, events are the results of the school's work in the school year. These objects unite all the different goals, objectives, content, forms and methods of children's education.

The object of regular attention of school directors is listening to lessons and their pedagogical analysis. In the management activities of school directors, there are three types of lesson analysis: *extensive analysis*, *short analysis*, and *aspect analysis* (*studying any aspect of the lesson*).

**Extensive pedagogical analysis of the lesson** means highlighting all the details of the lesson and discussing all its aspects as a whole, that is, the determination of educative, didactic, psychological, sanitary and hygienic requirements of the lesson. Extensive lesson analysis is carried out after listening to the lessons of the new teachers. Lessons of teachers whose experience needs to be generalized and disseminated may be the subject of a special study.

A brief analysis of the lesson requires the director, director's assistants, methodists' objective suggestions and recommendations, a good knowledge of teacher's personality, high methodical and managerial culture.

Aspect analysis of a lesson involves analysis of any aspect (side) of the lesson (for example, using visual aids to activate students' cognitive activity in the lesson).

Pedagogical analysis of educational work plays an important role in the analytical activities of the school leader. During the implementation of such activities, children participate in organizational and creative activities.

During the pedagogical analysis of upbringing work, the sequence of its implementation should be taken into account: joint determination of the goal; objectives, and form of conducting of the upbringing work; joint planning; characteristics of students' participation in the preparation of the work and pedagogical guidance of teachers; direct realization of the upbringing work; joint conclusion and analysis of the case.

The content of the final analysis of the school's work in the school year consists of the following leading directions:

- 1) quality of education;
- 2) quality of students' knowledge, skills and habits;
- 3) level of upbringing of students;
- 4) effectiveness of work with parents and the community;
- 5) health state and sanitary-hygienic culture of schoolchildren;
- 6) results of the activities of the school council, pedagogical council.

Conducting the final analysis, its objectivity, thoroughness, perspectives create conditions for developing a plan for the new school year.

#### ***18.4. Goal setting and planning***

The process of managing any pedagogical system involves setting goals and planning work. Improving goal setting and planning in education is related to the development and functioning of the pedagogical system. Planning allows predicting the main conditions and stages of the formation of the individual and the team.

Pedagogical activity is purposeful. The purpose of management activity is the beginning of the work, which determines the general direction, content, form and methods of this work. In order to achieve the common goal, it is necessary to realize its components. Therefore, complex-targeted planning is implemented at schools. On this basis, the school has the following plans: *long-term (perspective), annual, current*.

There are a number of requirements to consider when developing school work plans. The first requirement is that

the plan must be purposeful. This means that the goal should be set in the plan and the past experience that develops and deepens the main areas of work of pedagogical and student teams, should be taken into account. One of the requirements is planning prospectively. Among the requirements for planning there is the requirement of complexity. This means that on developing a plan, different tools, forms, types of work, their unity and interrelationships are taken into account. Compliance with the requirement of objectivity is based on the knowledge of the objective conditions of the school, its material and economic conditions, location, natural and social environment, pedagogical and student collectives.

In school practice, three types of plans are developed: perspective, annual, current.

**The perspective plan** is usually prepared for a period of five years. Its structure can be as follows:

- 1) responsibilities of the school during the planning period.
- 2) development prospects of the student contingent by years, number of classes;
- 3) renovating the educational process, prospects of application of pedagogical innovations;
- 4) the need of the school for pedagogical staff;
- 5) professional development (in-service training) of pedagogical staff;
- 6) material and technical base and teaching-methodical supply of the school;
- 7) social protection of teachers and students, improving conditions for their living, working and having rest.

**The annual plan** covers the entire school year, including summer vacations. The school's work plan is prepared for the entire school year and goes through several stages.

**In the first stage**, that is, in the first quarter of the school year, the school director and director's assistants study new normative and instructional documents, educational development issues, especially theoretical and methodical materials related to planning.

**In the second stage** (in the second quarter) an initiative group is created under the guidance of the director to develop and adjust the structure of the draft plan, determine the sources of the necessary information and the forms of its collection.

**In the third stage** (in the third quarter), the obtained information is analyzed, reports on the work of the commission members are heard, the reasons for the difficulties and ways to overcome them in the future are revealed.

**In the fourth stage** (in the fourth quarter), a draft plan is prepared and discussed. In the new school year at the first meeting of the school council, the school's work plan is approved.

The structure of school's annual plan can be nearly as follow:

- 1) a brief analysis of the school's work in the previous school year and the upcoming tasks for the new school year;
- 2) the work of the school collective on the implementation of general compulsory education;
- 3) activity of pedagogical collective to improve the quality of educational process;
- 4) joint work of school with family and community;
- 5) work with pedagogical staff;
- 6) intra-school control system;
- 7) strengthening the material and technical base of school;
- 8) organizational and pedagogical measures.

The current work plan is prepared for a quarter (a semester), this is completing the school plan. These plans are considered strategic plans in relation to the plans of teachers and heads of the classes.

### ***18.5. Functions of school management***

The notion of organization is used in several senses: for example, organization of lessons, organization of extracurricular activities; organization of work to implement the work plan of school leaders, teachers, student self-government, etc.

By its character, the organizational activity of a person is a practical activity. The function of the organization directs the implementation of decisions. During the organization of work, the questions of the human factor, choice of performers, their placement in the workplace are resolved. In this case, the content, form and methods of work are determined taking into account the real conditions and capabilities of the performers.

The organizational activity of the school director should be aimed at the formation of the pedagogical staff. The personal qualities of the leader, that is, professionalism, general and pedagogical culture plays a special role in this work. The ability to properly manage time and the time of subordinates are also the indicators of a director's organizational culture. A subject teacher should be an example to other teachers. Therefore, the teacher must seriously prepare for lessons and read new pedagogical and psychological literature.

There are different forms of school management. These are a school council, a pedagogical council, a meeting (consultation) of management staff, a meeting (consultation)

of assistants of directors, an operational consultation, methodical seminars, meetings of commissions, a meeting of student's committee, etc.

The pedagogical council is a council of professionals who work in one collective. It must address the questions directly related to the organization of the training and educational process, and identify the ways to improve it.

The activity of the pedagogical council is determined by the charter of the general education school. According to the charter, the pedagogical council is established in all general education schools with more than 3 teachers. The pedagogical council is a permanent body. The pedagogical council includes the director (chairman), the director's assistants, teachers, educators, a librarian, a doctor, the chairman of the parent's committee and the chairman of the school council.

There are two areas of activity of the pedagogical council:

- 1) production and formal field;
- 2) scientific and pedagogical field.

Production and formal field includes the approval of the school's annual work plan, discussion of the results of the school's work on quarters (now two semesters), approval of the plan of preparation and organization of examinations, transfer of students from class to class and graduation of high school students, results of the school year and conducting work with students in the summer.

The scientific and pedagogical field includes discussion of the instructions of higher authorities and the results of scientific-research works, application of best practices in school and the analysis of the pedagogical process.

The development of the scientific and methodical activity of the pedagogical council is the proof of the high level of

professionalism of the pedagogical staff. In such a school, the issues of the production are resolved promptly.

The preparation and holding of pedagogical councils can be divided into four stages:

- 1) planning of pedagogical councils that will be held during the year;
- 2) preparation for holding a specific pedagogical council;
- 3) direct holding of the pedagogical council;
- 4) work on the implementation of decisions of the pedagogical council.

Five pedagogical councils are usually held during the school year: one council at each quarter. The fifth pedagogical council is held at the end of the school year – in three sessions:

- 1) admission to exams;
- 2) results of examinations;
- 3) results of final exams.

The first pedagogical council is held at the end of August. It is dedicated to the approval of the school's annual work plan, discussion of the school director's report on the results of the last school year, and the discussion of the tasks for the new school year.

The following pedagogical councils develop the main problems of training and education. The main goal is to develop scientifically grounded recommendations for practical application in order to eliminate shortcomings.

Usually, the pedagogical staff of the school takes on any scientific and practical problem for each year. The topic determines the direction of the activities of pedagogical councils.

Suppose that the school decides to work on the following two problems in the current year:

- 1) activation of the training process;

2) issues of ethical education.

The agenda of the pedagogical councils that will be held during the year should also be related to these problems. In other words, all pedagogical councils should be thematically interrelated. In pedagogical councils different aspects of ethical upbringing, various issues of activating the educational process are put on the agenda of pedagogical councils for discussion. Presenters and additional presenters (co-presenters) are appointed for each issue.

The work of methodical unions on the subjects and self-education of teachers should also be thematically related to the problems to be solved in pedagogical councils (considering the characteristics of the subjects, individual training and interests of teachers).

Pedagogical councils should be an accumulator of pedagogical experience, taking into account the requirements of the time and the tasks of the modern school.

In general, the activities of the pedagogical council must be aimed at solving the following tasks:

1) discussing, evaluating and selecting curricula, programs, textbooks and teaching aids that meet state standards, application of forms and methods of the training, education and upbringing process;

2) implementing the perspective, annual, current work plans, discussing the work of the pedagogical staff of the school on improving the quality of training, education and upbringing work;

3) improving the qualifications of teachers, educators, developing the creative activity, forming an innovative environment in the pedagogical collective, studying, generalizing and disseminating the advanced pedagogical experience;

4) carrying out attestation of pedagogical staff, taking into account the opinion of teachers, students, parents, making proposals on the improvement of attestation technology, applying to the education authorities to assign categories and degrees to teachers;

5) discussing and approving the candidacy of teachers to be sent for internships, professional development (in-service training) courses, master courses, presenting the best teachers in various forms of material and moral remuneration, etc.

In order to facilitate the work of the pedagogical council, the meetings (consultations) are held with the director and the director's assistants. In the management system, these forms have also justified themselves.

The activities of the school council and the pedagogical council should not repeat each other, but on the contrary, they should complete each other.

Experience shows that the school council has become a useful body in management. The school council, which consists of three sectors is more effective: 1) pedagogical sector; 2) parent's sector; 3) student's sector.

**The pedagogical sector** deals with personnel issues (distributes the workload, appoints the heads of the classes, appoints people responsible for different areas) is engaged in increasing teachers' qualifications, attestation, and carries out public control. The pedagogical sector is selected by the pedagogical council.

**The parent's sector** is created instead of the parent's committee. The sector helps to feed children, solve school renovation issues, arranges the acquisition of pedagogical knowledge by parents, works with parents, assists in conducting upbringing activities, etc. The council of parent's sector is selected from the representatives of class parent's

committees and approved in the general school parent's meeting.

**The student's sector** is created instead of the student's committee. It performs the functions of children's self-government. The student's sector is selected at a meeting of representatives of students in grades V-XI. It organizes the duty, sports competitions, nights (parties), marches, Olympics, socially useful work, etc.

The general school council (with full board) meets once or twice a school year to discuss strategically important issues, hears and discusses the director's report on the school's prospects and responsibilities for the current year, reviews and approves the school's work plan.

The chairman of the school council is usually the school principal, parent, or one of the heads of the guardianship institution.

The main work during the year is carried out by the sectors, they meet once a quarter, listen to the information of the people responsible for a particular area, and determine the solutions to the decisions. The current work is carried out by the presidium of the council. Presidium meets once every two weeks (twice a month) and manages the school operatively. The presidium of the school council includes the heads of the sectors and representatives of the administration.

The organization of the work of the school council in this way makes it a useful tool in the school management system.

### ***18.6. Intra-school control and regulation in management***

The school has been authorized greatly in assessing the quality of education and upbringing of students. In this regard, the importance of control in the management of a

modern school has begun to increase. In connection with the restructuring of management structures in education, the functions of inspectors have been transferred to the school director and the director assistants. At the same time, the management activities of school directors remain under the control of the services of inspection of higher authorities.

Control is closely connected with all the functions of the management cycle, especially with the function of pedagogical analysis. Thus, the information obtained in the process of intra-school control becomes the subject of pedagogical analysis. Control provides rich and systematized information, shows the difference between the goal and the obtained result. And the pedagogical analysis is aimed at revealing the reasons. In this sense, the content of intra-school control and pedagogical analysis is one and the same direction of school activities. It is important that who realizes control must be professional and competent and objectively evaluate the situation, provide methodical assistance, and stimulate pedagogical activity.

The following general requirements are set for the organization of intra-school control:

**1. Systematicity of control** is aimed at creating a system of regular control at school. This control allows to manage the entire pedagogical process.

**2. Objectivity of control** allows to check the activity of the pedagogical staff on the basis of criteria developed and agreed in accordance with the requirements of state standards and educational programs.

**3. Effectiveness of control.** The results of the control must lead to positive changes and elimination of the revealed shortcomings.

**4. Competence of a person who realizes control** means knowing the subject and methods of control, seeing the

strengths and weaknesses in the work, being able to predict the development of the results of control.

In the school conducting literature the content of intra-school control includes the following:

- 1) implementation of educational programs and state educational standards;
- 2) quality of students' knowledge, skills and habits;
- 3) level of the quality of upbringing of students;
- 4) the state of teaching the subjects;
- 5) state and quality of extracurricular education and upbringing work;
- 6) work with the pedagogical staff;
- 7) effectiveness of joint activities of school, family and community;
- 8) implementation of regulatory (normative) documents and decisions, etc.

The problem of classifying the types, forms and methods of intra-school control is currently disputable. In this sense, this problem remains urgent for theory and practice.

The following classification, related to the forms and methods of intra-school control is widespread among pedagogical theorists and practitioners. Two types of control are shown in this classification:

- 1) thematic control;**
- 2) frontal control.**

**Thematic control** involves an in-depth study of any specific issue in the system of activities of the pedagogical staff, groups of teachers or separate teachers. Thus, the content of thematic control consists of different directions of the pedagogical process. Innovations implemented at schools, the results of the application of best pedagogical practice can also be the content of thematic control.

**Frontal control** involves a comprehensive study of the activities of the pedagogical staff, methodical unions or a separate teacher. Taking into consideration the difficulty of such control, the involvement of a large number of people in the control, it is advisable to conduct 2-3 controls per school year. During frontal control, all aspects of the teacher's activity (teaching, educative, social and pedagogical, management activity), all the aspects of the educational institution are studied.

There are the following forms of control:

**1. Personal control.** This form of control means supervision of the work of a separate teacher, the head of the class, educator. It can be thematic and frontal. Personal control of the teacher's activities is an incentive for the teacher's professional development.

**2. Class-generalizing control.** In this control, a set of factors influencing the formation of the class team and extracurricular activities are examined. The activities of teachers who work in the same class, their system of work on individualization and differentiation of training, the development of student's motivation and cognitive needs, the state of discipline, cultural behavior, etc. can be the subject of study.

**3. Subject-generalizing control.** This form of control is used to study the state and quality of teaching a separate subject in one or parallel classes (or at school). Representatives of both management and methodical unions are involved in carrying out such control.

**4. Thematic-generalizing control.** The main purpose of this control is to study the work of different teachers, who work in different classes. Such control is carried out in different directions of the educational process. For example: the use of ethnographic materials in the educational process,

the development of students' cognitive interests, the formation of the foundations of students' aesthetic culture in the lessons from the nature series, etc.

**5. Complex-generalizing control.** This form of control is used to control the organization of the study of a number of subjects in one or more classes. This form is predominant during frontal control.

In the process of intra-school control, the following methods are used: study of school documents, observation, conversation, oral and written control, questionnaires, chronometer (accurate measurement of the duration of labor processes using a stopwatch), interview, etc.

Quantitative and qualitative characteristics of the training and educational process are reflected in school documents. The school's teaching and pedagogical documents include the alphabetic lists of students, the personal files of students, class journals, the journal of optional classes, the journal of extended groups, and the book of registration of certificate on education, the book of minutes of meetings of the school council and pedagogical council, the book of orders for the school, the book of registration of pedagogical staff, etc. This list shows that school documents can contain plenty of information and can be used to prepare a generalizing, objective report.

The timing method is used to study the problems, such as the mode of the school, the rational use of the time for classes and extracurricular activities, the work and activities of students and teachers, their load, the volume of homework, reading speed, etc.

Thus, the choice of forms and methods of intra-school control is determined by its goals, objectives, the object of control and the characteristics of the subject, and by time.

### ***18.7. The main forms of organization of methodical work at school***

Forms of organization of methodical work at school are dynamic, they change and are updated depending on many factors. These factors are:

- 1) state policy, legislative acts and documents in the field of education;
- 2) the level of pedagogical culture of teachers, the indicators, that are revealed in the process of diagnostic measurement of their personality and professional activity;
- 3) moral and psychological environment of the school collective, material and technical opportunities for the organization of methodical work;
- 4) study of intra-school pedagogical practice, activity of teachers, professional preparedness of school leaders for the implementation of methodical work;
- 5) the specific situation in the school staff: the relationship between teachers, teachers and students, teachers and leaders.

In many schools, methodical councils are established by the initiative of school principals and teachers. Unlike school councils and pedagogical councils, the only function of the methodical council is to raise the scientific and methodical level of each teacher's activity. The effectiveness of the work depends on at least two reasons:

1. Who leads the methodical council?
2. What is the composition of the methodical council?

The most experienced teachers, who represent different stages of education, different profile subjects, enter the methodical council. They can be the heads of various methodical unions. Usually, the methodical council is headed by the deputy director for educational work.

The methodical council of the school determines the tactics and strategies for improving the pedagogical skills of teachers. The methodical council determines the issues discussed in methodical unions, commissions, develops and discusses the programs for seminars, workshops, lectures, the general programme of methodical work at school.

There are the following forms of methodical work in school:

- 1) methodical unions in subjects;
- 2) a unified methodical day at school;
- 3) problematic seminars and practicums;
- 4) young teacher's school;
- 5) school of advanced (best) practice;
- 6) individual work with teachers;
- 7) conducting open lessons;
- 8) scientific and pedagogical conferences and pedagogical lectures;
- 9) role-playing and business games;
- 10) modeling and analysis of pedagogical situations;
- 11) creative reports of teachers;
- 12) pedagogical consultations, etc.

One of the most widespread forms of methodical work at school is methodical unions of teachers in subjects.

Methodical unions unite subject teachers and primary class teachers. The optimal composition of the methodical union is 4-5 teachers of the same subject. In large schools, the methodical union can be created separately, and in 2-3 small rural schools there can be created joint methodical unions.

The content of the work of methodical unions is multifaceted. They consider the issues of improving the quality of educational work and knowledge of students, organizing the exchange of experience, applying advanced

pedagogical experience and the achievements of pedagogical science, discussing the most difficult sections and topics of new programs and textbooks, etc.

The work of the methodical union is carried out on the basis of a special plan. In the plan the goals and objectives for the new school year are formulated, the main organizational and pedagogical measures (design of studies (classrooms), examination of didactic material, approval of the texts of test papers, topics, etc.) are defined, topics of scientific-methodical reports, open lessons on subjects and extracurricular activities are approved, the forms and terms of the control of students' knowledge, skills and habits are determined.

One of the effective forms of methodical work is holding a unified methodical day (once a quarter for all pedagogical staff of the school). The topics of the unified methodical days are delivered to teachers in advance.

The content of the work of the unified methodical day includes: conducting open lessons and extracurricular activities, their detailed analysis and discussion, the summary of new methodical literature, summarizing the methodical day (in the form of a meeting, 'round table' or press conference). In these forms, teachers report on the results of their work on methodical topics. School leaders conduct the general analysis of the measure and assess it.

Problematic seminars and practicums are aimed at conducting theoretical and practical training of teachers in unity. The study of modern pedagogical theories is the content of problematic seminars. Their discussion helps teacher a lot in self-education work.

The school of advanced practice, as a form of methodical work, mainly realizes the goals and objectives of individual and collective protection. The main goal of the advanced practice school is the methodical assistance of experienced

teachers, and school leaders to less experienced teachers. The establishment of such a school is voluntary.

A school for young teachers can also be established in the structure of the advanced practice school. Young teachers unite under the guidance of an experienced teacher or one of the school leaders. The work is carried out according to a special plan. The plan includes the discussions of issues, such as the procedure and techniques of setting the goal of the lesson and extracurricular activities, the features of planning the work of the head of the class, etc.

The activity of problem groups (innovation groups) is of great interest due to the granting of certain rights to the schools for the organization of experiments. Such group of teachers can be formed at the initiative of school principals, scientists and pedagogues, as well as teachers themselves.

The problem group can focus its activities on studying, generalizing and disseminating of best practices both at his or her own school and beyond it. If the problem group is busy with developing and implementing its own concept, such work will be carried out under the guidance of teachers from higher pedagogical schools as usual.

Scientific and pedagogical conferences, pedagogical lectures, reports of separate teachers or methodical unions are the final forms of methodical work. They are dedicated to the results of the work done in a certain period of time. The authors of the reports inform their colleagues about the results of their research.

In the end, it should be noted that in the organization of methodical work, forms can not be divided into old and new forms, modern and non-modern forms, because the effectiveness of the work depends on individual, group or collective needs and opportunities.

***Check yourself.***

**1. Define the incorrect answer.**

- A) cooperation between colleagues with unified management.
  - B) coordination of state and public bases in management.
  - C) unbreakable interaction of science, theory and practice in management.
  - D) planlessness in management.
  - E) planning in management.
- A) B) C) D) E)

**2. Define the incorrect answer.**

- A) systematicity and complexity in management.
  - B) tendency to achieve efficiency, final results in management.
  - C) unsystematic character in management.
  - D) rational coordination of centralization and decentralization in management.
  - E) democratization and humanization in management.
- A) B) C) D) E)

**3. Match the levels of management to the related statements.**

*1. The first level*

*2. The second level*

*3. The third level*

*4. The fourth level*

- a) This level includes teachers, upbringers, heads of the classes.
- b) This level includes school directors, heads of school councils, student's committees, public organizations.
- c) This level includes students, class and high school students' self-government..

d) This level includes deputies of school director, school psychologist, social pedagogue, a person responsible for the organization of socially useful work, assistants of director for administrative and economic work, and also bodies and unions involved in self-government.

**A) 1b; 2d; 3a; 4c    B) 1a; 2b; 3c; 4d    C) 1d; 2c; 3a; 4b**  
**D) 1b; 2c; 3d; 4a    E) 1c; 2b; 3d; 4a**

**4. Managerial values of pedagogical systems are:**

- A) values-goals.
  - B) values-knowledge.
  - C) values-relationships.
  - D) values-qualities.
  - E) all these are true.
- A)   B)   C)   D)   E)**

**5. Define the main styles of leadership.**

- A) all are true.
  - B) authoritarian style.
  - C) negligent style.
  - D) democratic style.
  - E) none of them is true.
- A)   B)   C)   D)   E)**

**6. Complete the statement. Any management cycle ... .**

- A) begins with thematic analysis.
  - B) ends with parametric analysis.
  - C) begins and ends with pedagogical analysis.
  - D) ends with extensive pedagogical analysis of the lesson.
  - E) begins with final analysis.
- A)   B)   C)   D)   E)**

**7. Match the requirements for the organization of intra-school control to the related statements.**

*1. Systematicity of control*

*2. Objectivity of control*

*3. Effectiveness of control*

*4. Competence of a person who realizes control*

a) It means knowing the subject and the methodics of control, seeing the strengths and weaknesses in the work, being able to predict the development of the results of control.

b) It is aimed at creating a system of regular control at school. This control allows to manage the entire pedagogical process.

c) The results of the control must lead to positive changes and elimination of the revealed shortcomings.

d) It allows to check the activity of the pedagogical staff on the basis of criteria developed and agreed in accordance with the requirements of state standards and educational programs.

**A) 1a; 2b; 3c; 4d    B) 1b; 2d; 3c; 4a    C) 1d; 2c; 3a; 4b**

**D) 1b; 2c; 3d; 4a    E) 1c; 2b; 3d; 4a**

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**Chapter XVIII**

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**Correct answers of tests**

<b>CHAPTER I.</b>	1) A; 2) B; 3) B; 4) A; 5) B; 6) D; 7) E; 8) C
<b>CHAPTER II.</b>	1) C; 2) D; 3) A; 4) C
<b>CHAPTER III.</b>	1) A; 2) B; 3) C; 4) D; 5) A; 6) C
<b>CHAPTER IV.</b>	1) A; 2) C; 3) D; 4) B; 5) E; 6) C
<b>CHAPTER V.</b>	1) A; 2) B; 3) C; 4) D; 5) E; 6) A
<b>CHAPTER VI.</b>	1) A; 2) D; 3) B
<b>CHAPTER VII.</b>	1) B; 2) A; 3) E; 4) B
<b>CHAPTER VIII.</b>	1) A; 2) C; 3) B; 4) E; 5) D
<b>CHAPTER IX.</b>	1) E; 2) C; 3) D; 4) B
<b>CHAPTER X.</b>	1) A; 2) B; 3) B; 4) B; 5) E; 6) E; 7) B; 8) C
<b>CHAPTER XI.</b>	1) C; 2) A; 3) B
<b>CHAPTER XII.</b>	1) D; 2) C; 3) A; 4) B; 5) A; 6) D; 7) E
<b>CHAPTER XIII.</b>	1) E; 2) D; 3) A; 4) B; 5) E; 6) C
<b>CHAPTER XIV.</b>	1) A; 2) B; 3) C; 4) D; 5) E; 6) A; 7) C
<b>CHAPTER XV.</b>	1) A; 2) B; 3) C; 4) D; 5) E
<b>CHAPTER XVI.</b>	1) C; 2) D; 3) A; 4) B; 5) E; 6) C
<b>CHAPTER XVII.</b>	1) C; 2) A; 3) B; 4) D; 5) E
<b>CHAPTER XVIII.</b>	1) D; 2) C; 3) A; 4) E; 5) A; 6) C; 7) B

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