LECTURE 4. THE LOGIC OF ORGANIZING PEDAGOGICAL RESEARCH

Methodological bases of pedagogical research in the field of education

Issues discussed:

1. The concept of the logic of research
2. Scientific research apparatus
3. Criteria for the success of an exploratory search

The concept of the logic of research

The logic of the study is the sequence of its steps:

- analysis of the available facts, identification of contradictions, inconsistencies;
- the emergence of the leading idea of transformation (the design of the study);
- formulation of the problem and topic;
- designation of the object and subject;
- setting goals and objectives;
- putting forward a working hypothesis;
- design of research stages;
- selection of research tools, development of methods for its organization and conduct;
- evaluation of results, their execution; putting the results into practice.

Stages of the research process: search, diagnostic, staging, self-research, design and implementation.

The first stage is search. It is associated with the study of traditional experience, real practice, assessment of its compliance with social needs, the needs of participants in the educational process. The main tasks are to identify contradictions, inconsistencies, insufficiency of links between the components.

The second stage is diagnostic. A selection of already known methods is carried out, new ones are created if necessary, a quantitative and qualitative analysis of the results is carried out, and their systematization. The main conclusion that will be made at the end of this stage is the conclusion about the positive qualities of the process under study and its shortcomings.

The third stage is staging. The leading idea is determined. The leading idea is derived on the basis of a theoretical concept, scientific provisions that make up the initial position of the study.

For example, research can be aimed at selecting new content, developing new technologies, justifying the need for a transition to new types of educational organizations, strengthening ties with the environment, optimizing pedagogical relations, etc.

The fourth stage is the actual research. The logic of this stage is very variable. As a rule, at this stage, it is necessary to carry out the following actions: organization of the research base, choice of methods, development of the methodology of the experiment, determination of its stages, experimental work, obtaining quantitative results, quantitative and qualitative analysis of the results, testing the hypothesis, constructing preliminary conclusions (concretization and clarification).

The fifth stage is design and implementation. Structuring the content of the reporting documentation (singling out the theoretical and practical parts), the design of the work (reports, reports, articles, abstracts), the development of illustrative material (tables, figures). Text editing.

Approbation (discussion of the findings, their presentation to the public), implementation of the results in practice, preparation of recommendations.

Scientific research apparatus

The methodology characterizes the components of the study:

-Object (area of study);

-subject (specific part of this area);

-Goals and objectives of the study;

-a set of research tools necessary for their solutions;

- research logic;

- ways to implement the results, evaluate them

The development of the scientific apparatus is preceded by the choice of an objective area (direction) of research in which the search for the problem will be carried out.

Areas of study in the direction of "Pedagogical education":

-Educational work in an educational organization;

-Active and interactive technologies of education and upbringing;

- Organizational and pedagogical conditions for improving the quality of the educational process;

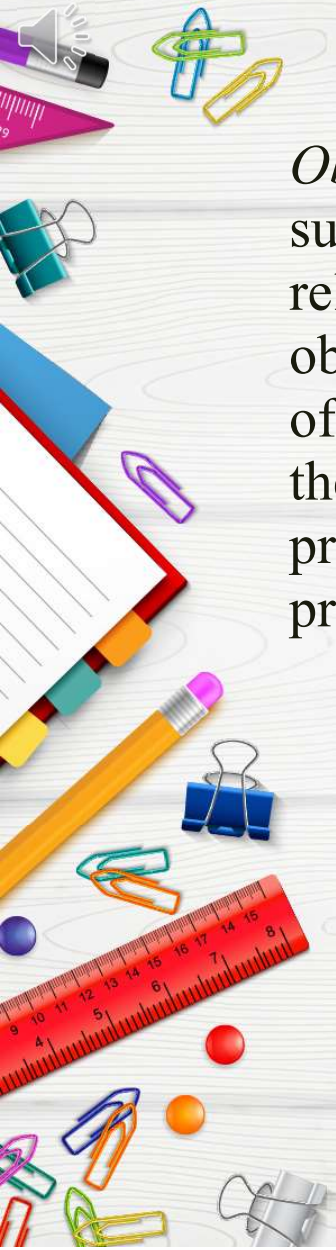
-Research work in an educational organization;

-Design of the educational process;

-Personnel management in education;

-Leadership and organizational development in education;

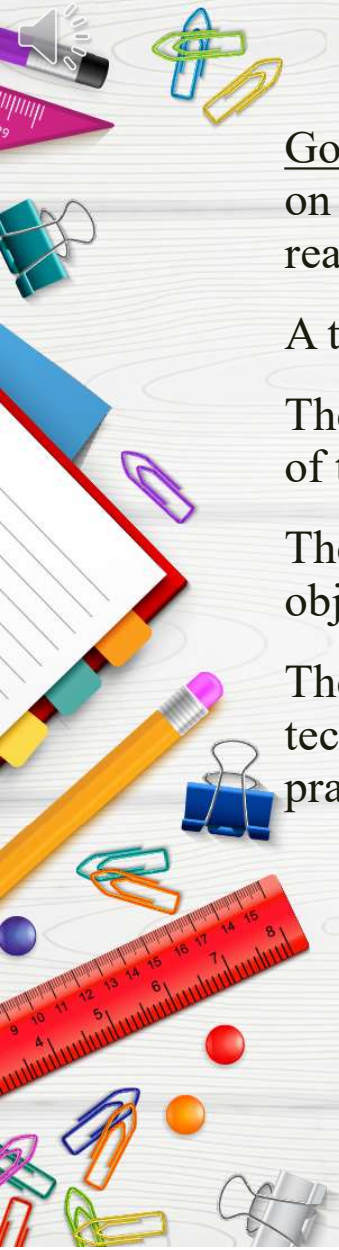
-Communication management in education.



Object of study. This is the search field. This is the unity of objective and subjective directions of research. As the object of knowledge are connections, relationships, properties of a real object. The object of research is a certain objective set of properties and relations, which is known by the subject. Examples of the formulation of the object: the process of professional training of students; the process of theoretical training; extracurricular activities of students; the process of education; pedagogical interaction of subjects of the educational process.

The subject outlines the boundaries of the research search.

The subject is, therefore, a perspective, a point of view of individual elements, connections between them. In other words, a subject is a certain aspect of studying an object (target, content, technological, organizational, etc.). The subject can be a goal-setting technique in training or education, techniques, means of designing the content of training, the use of active methods and forms in training, education, conditions (organizational-legal, social, psychological and pedagogical) for increasing the effectiveness of training, education.



Goals, objectives, research hypothesis. The purpose of the study is *the result* of foresight (based on a comparison of the pedagogical ideal and potential reserves, opportunities). A goal is a reasonable representation of the overall final and intermediate results of a search.

A task is a link, a step, a stage in achieving a goal. As a rule, there are three groups of tasks.

The first group: *historical and diagnostic*. These tasks are connected with the study of the history of the issue, modern problems: general scientific foundations, clarification of concepts.

The second group: *theoretical - modeling*. The tasks are related to the study of the essence of the object, its structure, functions, ways of transforming reality.

The third group: *practically - transformative*. Associated with the development of methods, techniques and means to improve the efficiency of the educational process, the development of practical recommendations.

A hypothesis is a reasonable assumption about how, by what means, it is supposed to obtain positive results.

A scientific hypothesis goes beyond the limits of the studied facts, explaining them and performing a predictive function. The hypothesis is formulated on the basis of the established object and subject of research, its goals and objectives.

The hypothesis, therefore, is one of the main methodological tools that organizes the entire research process and subordinates it to internal logic.

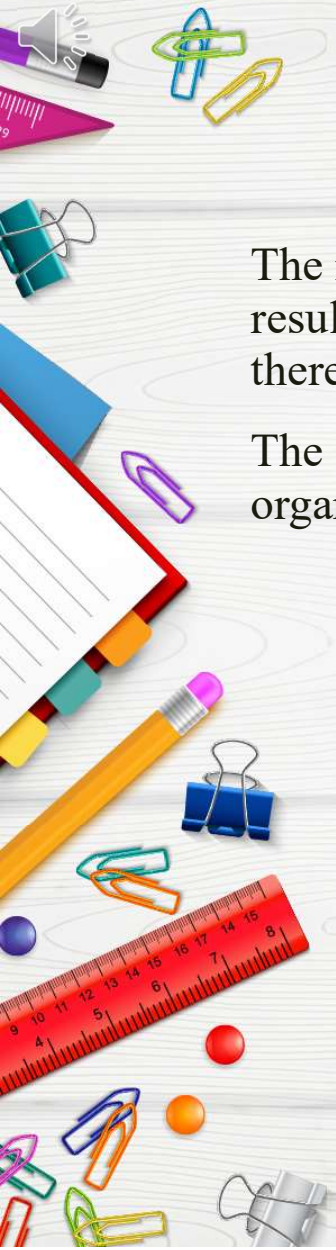
Criteria for the success of an exploratory search

There are two types of evaluation: measurement and peer review. Evaluation is carried out on the basis of the established norm, ideal, standard. Evaluation requires criteria (signs). Criteria are generalized assessment indicators. In pedagogical research, three criteria are traditionally distinguished:

- cognitive (depth, breadth, strength, consistency of knowledge);

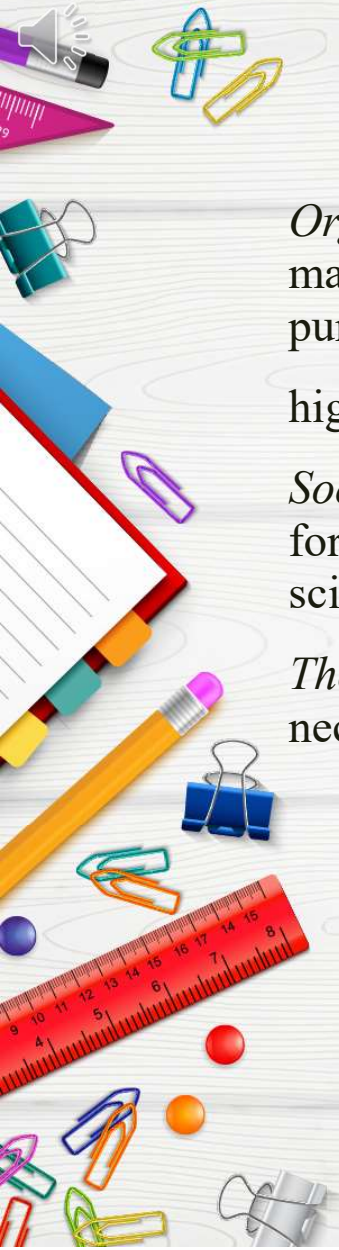
- motivational-value (interest, enthusiasm, perseverance, acceptance of terminal values;

- activity (activity, involvement in various activities).



The results of practical activity, research search can be assessed as successful only when positive results are achieved for all criteria or positive results are achieved for one criterion, provided that there is no deterioration in others.

The success of scientific and practical activities depends on the presence of favorable conditions: organizational and legal, social, material and technical, methodological, moral and psychological.



Organizational and legal conditions include the availability of a base for conducting research, management structures for organizing and coordinating the research activities of the teaching staff, purposeful,

high-quality selection of scientific consultants, experts.

Social conditions: the presence in the city, region of responsible workers who are aware of the need for innovation, new scientific developments, creative workers, organizations capable of conducting scientific research, finding opportunities for implementing the results of scientific work.

The material and technical conditions are related to the provision of research teams with the necessary equipment, premises, materials, instruments, and computer technology.

Methodological conditions are associated with the availability of diagnostic tools, recommendations for conducting research.

Moral and psychological conditions are determined by the moral and psychological climate in the team, the moral and business qualities of the leaders of scientific teams, the correspondence of their personality structure to the scale of the scientific tasks set, the level of their scientific qualifications, authority in the scientific community.