

## GOAL, OBJECTIVES AND STAGES OF ORGANIZING EXPERIMENTAL WORK

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**Abstract.** *The article discusses information about the purpose, objectives and stages of organizing an experiment in scientific research.*

**Keywords:** *scientific research, experimental work, purpose of experimental work, tasks of experimental work, stages of organizing experimental work.*

One of the important goals is to test the implementation of the ideas put forward in the scientific research works based on the content of the priority tasks aimed at reforming the education system in our country. Experimental testing of research work it is a set of methods that cover a wide range of knowledge about the object of research. The main task of organizing pedagogical experimental test work is to test the application in practice of the idea put forward during the study, the received scientific innovations and practical recommendations in practice in the experiment and provide approximate proof of the theory of development specified in the object of Study [1].

"Experimental work is an integral part of scientific research, and it is the main criterion for confirming the authenticity, practical importance and applicability of the results of any research in the field" [2]. It can be seen that the experimental work is based on the purpose of the research work, and its main task is to determine the truth of the advanced scientific knowledge. As a result of this, scientific, pedagogical and methodical recommendations for the solution of problems related to the education and training process, suggestions for improving the quality and efficiency of the organization and conduct of the education and training processes will be developed.

The purpose of pedagogical experiments is to identify various processes, including pedagogical processes or effective pedagogical-psychological conditions for the development of the learner's personality, and to carry out practical experiments, evaluation components determined according to the content and essence of each research, based on criteria and indicators.

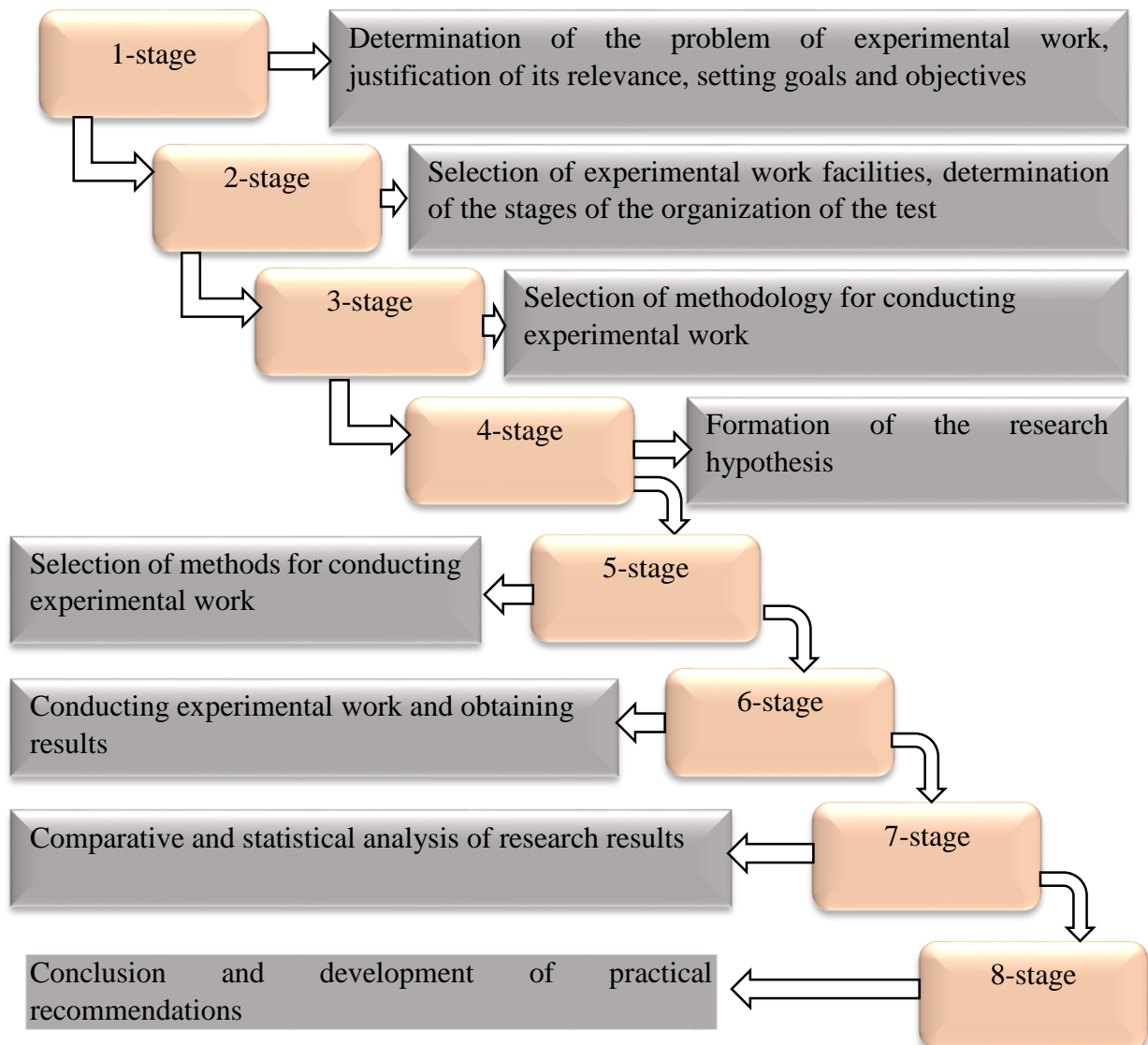
As a tasks of pedagogical experimental work:

- To draw scientific conclusions by testing in practice the ideas advanced based on the purpose of the research problem
- To test and draw conclusions in practice the cases reflected in the scientific news
- Determination of the effectiveness of the practical application of recommendations, methodologies and other regulatory requirements put forward by the researcher
- Consists of checking the accuracy of the results obtained, their reliability and the accuracy of the conclusions

The main essence of the pedagogical experiment is to actively apply the proposed ideological processes, theories and mechanisms to a specific educational process. The stages of organizing pedagogical experimental works and analyzing their results are listed below:

Pedagogical experimental work includes three main stages:

Stage 1. At this stage, the problem is identified, the relevance of the object and subject of research, on the basis of which the goals and objectives are determined.



Stage 2. Direct conduct of pedagogical experiment. At this stage, the researcher must receive answers to questions about the new tools and methods that he introduced into pedagogical practice. To do this, the researcher creates various experimental situations, the essence of which is to form the conditions necessary for learning.

In the second stage of pedagogical research, it is necessary to solve a number of problems that directly affect the effectiveness of the research and the reliability of the obtained data.

- determining and studying the initial conditions of the experiment;
- a) description of groups of subjects;
- b) implement the formation of efficiency criteria of the proposed experimental system;
- c) giving instructions to the participants of the experiment (getting acquainted with the conditions, rules, procedures, etc.);
- d) implementation of the developed program (project) aimed at the formation and development of certain knowledge, skills, qualities, etc.
- e) determination of intermediate results by conducting experiments;

f) identification and elimination of possible shortcomings in the process of implementation of formation experience;

Step 3. Final. At this stage, processing and evaluation of the experiment is carried out:

h) comparison of the initial level recorded in the first stage of the research and the final level after conducting the formation experience;

i) the characteristics of the conditions in which the experiment was conducted, especially the moments that had a positive effect on the research result are recorded;

j) the dynamics of changes in indicators were analyzed;

k) summarizing conclusions are formed, practical and methodological recommendations are developed.

l) The conditions that must be fulfilled for the effectiveness of the experiment include the following:

m) to carry out a preliminary theoretical analysis of the research object;

n) concretization of the research hypothesis, comparing its novelty and contradictions with traditional views;

o) clearly form experimental tasks, develop signs and criteria by which results, events, means, etc. are evaluated;

p) correct identification of the minimum necessary, but sufficient number of experimental objects;

q) availability of conclusions and recommendations obtained from experimental materials, determining their superiority over traditional, usual solutions.

The organization of pedagogical research implies the modeling of pedagogical activity. When conducting pedagogical research, our main goal is to increase the effectiveness of education. It illuminates the result of the work carried out by researchers doing scientific work over the years, studied, analyzed and put their research into practice. These results show how relevant our research is. Through these results, we can see the contribution of researchers to the improvement of educational efficiency in the percentage difference obtained from the results.

## **REFERENCES**

1. M.E. Mamarajabov. Technologies of organizing and conducting experimental work in pedagogical research.-T.: "Bookmany print", 2022, 128 pages
2. The Higher Attestation Commission under the Cabinet of Ministers of the Republic of Uzbekistan. 2010, No. 2