

## METHODOLOGY OF ORGANIZING STUDENTS' RESEARCH ACTIVITIES

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**Annotation.** This thesis analyzes the methodological foundations, principles, and stages of organizing students' research activities. In the modern system of higher education, engaging students in scientific research and forming their research competencies is gaining significant importance. The thesis covers the theoretical-methodological approaches, organizational stages, methods, and tools of organizing research activities. Additionally, practical recommendations for the effective organization of students' research work have been developed.

**Keywords:** research activity, methodology, stages of organization, research competency, scientific supervision, student scientific society.

**Introduction.** The development of education and science, enhancing the intellectual potential of youth, is one of the priority directions of state policy in the Republic of Uzbekistan. In particular, the Laws "On Education," "On Science and Scientific Activity," and a number of Presidential decrees related to the field have defined tasks for supporting talented students and widely engaging them in research activities [1]. Therefore, improving the methodology of organizing students' research activities is considered a pressing issue.

**Main Part.** The methodology of organizing students' research activity refers to a system of theoretically grounded methods and tools for purposefully planning, organizing, implementing, and monitoring the research process.

*Principles of organizing research activity.* According to the experience of Fergana State Technical University, the organization of students' research work is based on the following principles [1]:

- Interrelation and continuity of educational and research processes;
- Harmony of theoretical and practical skills;
- Continuity and consistency of activity (bachelor's–master's);
- Gradual complication of research forms according to the student's level of knowledge.

*Stages of organizing research activity.* In international experience, students' research work is organized in four stages: Presearch, Search, Interpret, and Report [2]. These stages can be interpreted as follows:

1. **Preparation stage** – selecting the research topic, defining goals and objectives, formulating a hypothesis. Here, the student's interests and current problems in the field of science are taken into account.

2. **Search stage** – studying scientific literature, collecting data, working with empirical material. At this stage, the student acquires skills in filtering, analyzing, and systematizing information sources.

3. **Analysis stage** – processing collected data, statistical analysis, summarizing results. This stage develops the student's analytical thinking.

4. **Report stage** – formalizing research results, presenting in the form of a scientific article or thesis, participating in conferences.

*Classification of research methods.* Methods used in students' scientific research can be divided into three levels [9]:

- **Empirical level methods:** observation, survey, interview, testing, measurement, comparison. These methods are used to study specific facts and phenomena.

- **Experimental-theoretical level methods:** experiment, analysis and synthesis, modeling, induction and deduction. These methods allow verifying facts and identifying cause-and-effect relationships.

- **Theoretical level methods:** studying and summarizing literature, abstraction, idealization, axiomatic method. These methods serve to draw theoretical conclusions.

*Forms of organizing research activity.* The following forms of organizing students' research activities are widely used in higher education institutions of Uzbekistan [1, 3, 5]:

**Student Scientific Society (SSS)** – a structure uniting talented students, serving to develop their scientific potential. Within the SSS, scientific circles and problem groups operate.

**Scientific circles** – aimed at forming students' research skills in a specific scientific field. Circle members regularly participate in scientific seminars and prepare presentations.

**Scientific projects and grants** – create opportunities for funding students' independent research. In particular, at Tashkent State Agrarian University, grant funds were allocated to the startup projects of 2 students in 2024 [3].

**Scientific conferences and competitions** – allow students to present their research results and exchange ideas with the scientific community. Competitions such as "My Agrostartup Project," "Ideathon – Uzbekistan 2030," "The Most Talented Student of the Year" are among these [5].

*Methodological support and scientific supervision.* The effectiveness of students' research activities largely depends on their coverage with methodological support. The textbook "Methodology of Scientific Research" is intended for master's students and covers scientific cognition, research methods, and the procedure for formalizing results [7].

Furthermore, establishing scientific supervision based on the "mentor-apprentice" system is of great importance. Namangan State Technical University has implemented the practice of strengthening cooperation with professors and teachers, and maintaining constant contact between talented students and their scientific supervisors [5].

*International experiences.* Various models of organizing students' research activities exist in international practice. As a result of experimental work conducted in regional universities of Russia, a comprehensive methodology for preparing students for research was developed. In the experiment conducted in 2014–2018, 242 students and 46 teachers participated. As a result, students published over 450 scientific articles, won 28 grants, and became winners in more than 50 competitions [6].

In US universities, the CREATE method is widely used. This method is a five-stage system that helps students analyze and understand scientific articles. Students work in pairs to select, analyze, and prepare presentations on scientific articles. Through this process, they develop skills in working with scientific texts, critical thinking, and public speaking [4].

**Conclusion.** The methodology of organizing students' research activities includes the following main components: theoretical-methodological foundations (principles, approaches), organizational stages (preparation, search, analysis, report), research methods (empirical, theoretical, experimental), and organizational forms (scientific society, circles, projects, conferences).

For the effective organization of research activities, the following are necessary:

- Individualized approach based on students' interests and capabilities;
- Improving the system of scientific supervision;
- Strengthening methodological support;
- Introducing innovative forms of engaging students in scientific research;
- Expanding international cooperation and studying advanced foreign experiences.

With systematic work in these directions, students' research competencies will develop, their scientific potential will increase, and as a result, specialists who make a worthy contribution to the development of society will be trained.

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