

## DEVELOPMENT OF SCIENTIFIC AND RESEARCH COMPETENCES IN MASTER STUDENTS

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**Abstract.** *This article examines the development of research competencies in graduate students. It is also indicated that in the process of obtaining higher education and subsequent professional development, undergraduates must be aware of scientific approaches, concepts, theories, the content of the latest information on their subject. Although undergraduates take a special interest in a particular subject, they read a lot of works in this area, look through a lot of popular science materials, get acquainted with scientific journals, materials on the Internet and try to find out what they do not understand by asking questions of the teacher. It is described that the teacher's readiness to accurately and accurately answer the questions of graduate students is a key factor in the rational orientation and development of their talents.*

**Key words:** *innovations, science, scientific and pedagogical activity, research, scientific research, discoveries, self-awareness, scientific conferences, intellectual development.*

The independence of our republic has opened a wide path for the development of science in various directions. In this process, hard work and creative searches of our scientists are of particular importance. Indeed, on January 31, 2020, President Shavkat Mirziyoyev, during a meeting with scientists, young researchers, heads of research institutes and representatives of the manufacturing sector emphasized the importance of "increasing the efficiency of the implementation of scientific developments, ensuring the coordination of research on the needs of industry." adopted. From this point of view, one of the most pressing problems today is the study of philosophical and methodological issues of scientific and creative activities of scientists.

A person changes the world on the basis of his creative searches, manifesting himself as a creator, creator, inventor, that is, a person poses and solves various problems, finds his own solutions, and sometimes uses unique approaches and methods for such solutions. A creative person is a person with high abilities, deep intelligence based on life experience, the unity of truth and goodness, high truth, a community of justice and truthfulness, a high level of mental and moral maturity, recognition of values, and the assimilation of special feelings in oneself everything and a new look at the event is understood if you look at it through the eyes of the mind.

The problem of pedagogical research, which is a special form of scientific research, has a specific methodological character. Its main function is manifested in the subject's cognition of existence, events. In this regard, the issue of developing research competencies among graduate students is of great importance. Indeed, scientific activity refers to the active, consistent influence of the subject on the object. In the process of this impact, a person changes the environment around him, creating or discovering something new, hitherto unseen, misunderstood, unknown, strange and fascinating. In this sense, activity is a necessary condition for the existence of human society, human behavior aimed at changing the world in accordance with its purpose.

The problem of the method has always been in the center of attention of the pedagogical scientific world. Method (Greek Metods - method) in a broad sense means a path, like any form of creative activity [4]. The scientific legacy of scientists and philosophers who have made a name

for themselves in the history of science can also be appreciated in many ways by the methods on which they rely. A method is also a set of rules, procedures, methods, actions and criteria of knowledge, known in one form or another [5]. This is a system of principles, requirements that directs the subject to perform a specific task to achieve certain results in this area of activity. This saves time, effort in searching for the truth, helps to achieve the goal in the closest and easiest way. The present method acts as its own beacon, and, thus, the subject of knowledge continues on his way, avoiding mistakes. Consequently, research methods are a condition, a product and a guarantee of success.

Each method is primarily determined by the object of study (individual objects or their classes). The method doesn't stay the same, it can be changed with the dispatched object. The reliability of the method is always determined by the content of the object [6]. Any method is objective in its content. It should be recognized that it is formed, exists and develops in a complex dialectical unity of objectivity and subjectivity. However, the method is subjective in form, since its "carrier" is a specific subject of cognition [7].

The effectiveness of each method depends primarily on the content, depth, importance of the theory. Consequently, the concepts of "theory" and "method" are different and at the same time different in content. Their similarity is manifested in the fact that these concepts are interrelated and similar in the depiction of real events. Strictly speaking, a method is an action-driven theory with a "sharp peak" aimed not only at a deeper understanding of reality, but also at changing it in the process of practice. Any method is based on a certain theory and manifests itself as a necessary condition for research [4]. The effectiveness of each method is based on its deep content and essence, the fundamental nature of the theory. In turn, the content of the method expands, that is, the scope of application of the method changes as knowledge deepens and expands, and it is applied in practice.

Scientific and creative activity is a constant readiness of a person to be aware of changes in himself and those around him, to be able to get out of his shell on the basis of new thinking. The desire to invent something new demonstrates the theoretical well-being of the scientist.

Today, many scientists study the theoretical and practical aspects of science on a scientific basis. In our opinion, it is important to use the experience of great scientists in the harmonization of theoretical ideas in practice, in the creation of discoveries and inventions. Because scientific and pedagogical activity is a form of individual or collective striving, which is based on a specific research.

First, the development of scientific knowledge about research and all its forms (artistic, technical, scientific, etc.) led to the formation of various philosophical interpretations of its essence. This requires clarification of its content, the development of a scientifically based definition based on the results of scientific research in the field of research.

Secondly, the problems of the influence of the development of research competencies on undergraduates in the life of society and the individual have been actively studied by our scientists in recent years. On this occasion, textbooks, brochures, collections of scientific and theoretical significance have been published, doctoral dissertations have been defended. However, in our opinion, the system of research activity as a heuristic reality has not yet been subjected to extensive and specific philosophical analysis. Therefore, a comprehensive and comprehensive philosophical analysis of the conceptual aspect of scientific and creative activity in the scientific-theoretical and methodological literature remains an urgent task.

Thirdly, a comprehensive study and effective use of various aspects of the development of research competencies in graduate students is one of the important tasks in the upbringing of a harmoniously developed personality. Therefore, on January 31, 2020, during a meeting with scientists, young researchers, heads of research institutes and representatives of the production sector, President Shavkat Mirziyoyev said: "It is necessary to support young researchers and encourage the effectiveness of the doctoral system. Propose the introduction of a full savings payment practice to provide appropriate incentives for doctoral students and their supervisors or consultants who defended their dissertations ahead of schedule. Officials should be instructed to develop a concept for the development of science until 2030, which will determine the basis for scientific, technical and innovative development in the medium and long term noted that [1]. After all, it's time to focus on the educational aspects of scientific and creative activities.

Fourth, today, new ideas and principles of activities for the development of research competencies among undergraduates are increasingly integrated into the research process, which shows that modern science simultaneously forms different levels of interdisciplinary methods and research paradigms. In this sense, it is important to expand the scope of research to ensure that efforts in this area are effective and to develop specific recommendations in this regard.

Fifth, there is no doubt that the process of developing research competencies in graduate students is deep work, but it is very different from all other types of mental work. Scientific research is a constant phenomenon. The personal qualities of the creator play an important role in this. If a creative worker is hardworking, organizes every day according to a specific plan, appreciates time, is brave and is not afraid of difficulties, he will be able to bring the matter to the end. If everything is the other way around, then the research objectives will remain a good find in the form of a beautiful plan. This emphasizes the relevance of a deeper study of the spiritual and ethical aspects of the personal qualities of a researcher (especially scientific ethics and responsibility).

Sixth, there are modern views on the process of scientific research, according to which the creation of innovations and discoveries is not enough, but they must be applied in practice and evaluate the level of effectiveness. In this sense, synergetic is becoming a paradigm that illuminates the heuristic aspects of research in a new way. Consequently, the methodological study of achievements in this area is one of the urgent problems.

Seventh, the development of research competencies among undergraduates provides students with practical assistance in self-awareness, self-esteem, that is, if a person wants to be a real scientist, he can control his hobbies and aspirations, make him rational, effective and rational. Optimal solutions, the heuristic must engage in activities. The result of such activities is the manifestation of discoveries, creativity. This situation opens up new opportunities for the analysis, understanding and evaluation of research activities. In this regard, a deeper study of such approaches to research activities will help to identify its specific features.

Currently, the following forms of research work are widely used in the magistracy: participation in scientific conferences, international programs, competitions, Olympiads. Based on this, the following system of work with graduate students can be distinguished: 1) work in scientific circles and scientific societies; 2) engage in research work; 3) participation in competitions, competitions, grants; 4) participation in the Olympic Games; 5) participation in scientific conferences.

These types of work with graduate students serve as an excellent school for them to conduct research in the future.

- organizing a popular science TV program "Intellectual Development" aimed at expanding the scientific horizons of young people, supporting their interest in natural and technical sciences, increasing their knowledge in the field of information and communication technologies;

- To activate scientific work and the intellectual potential of graduate students, it is necessary to create a broad sectoral structure of student scientific sectors at the level of educational institutions [2].

At the same time, it will be possible to fill the information gap among the majority of graduate students, to increase the number of published works of graduate students, and also to create a scientific community of the department, department and faculty.

One of the promising areas for the development of research competencies among graduate students is the intellectual education of graduate students, research work as a means of development, the search for forms of scientific creativity, and their enrichment with new content. In this regard, it is necessary to organize master classes for undergraduates studying at higher educational institutions, hold meetings with scientists, form a culture and skills for participating in scientific discussions, teach the culture of scientific speech and public speaking. Demonstrate their growing scientific activity, publish scientific articles and learn how to lecture at seminars and conferences, share the results of their activities with each other, get acquainted with the latest achievements in the world of science.

Further development of the scientific activities of postgraduates is associated, first of all, with the development of the processes of integration of education and science, the intensification of innovative activities, the deepening of activities aimed at increasing the efficiency of joint research [3].

In cooperation with the Republican Academy of Sciences, it would be advisable to create a Coordinating Council in the Youth Union of Uzbekistan to stimulate, activate and integrate scientific research and intellectual development of undergraduates, as well as the scientific and intellectual development of undergraduates. The main purpose of creating such a council is to unite the scientific and educational process and create a single information space in the field of science and education.

Nowadays, because of familiarity with the field of research of most students, their published scientific works, it becomes obvious that they are not working on a specific topic. The Coordinating Council, on the other hand, determines the topics of research work of undergraduates, directs them to regular work on a research problem and exercises control. As a result, the correct allocation of the time budget of graduate students prevents their physical and mental exhaustion, creates motivation for interest and enthusiasm for learning.

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