



## Psychological Possibilities Of Organizing Scientific Research Works In Higher Education Institutions

**Rakhimov Bakhtiyor Khudayberdiyevich<sup>1\*</sup>, Eshbekov Sardor Jurakulovich<sup>2</sup>, Eshbekova Gulbahor Zafarboevna<sup>3</sup>**

<sup>1</sup>*\*professor Gulistan state university*

<sup>2</sup>*Independent researcher of the Karakalpak branch of the Scientific Research Institute of Pedagogical Sciences of Uzbekistan*

<sup>3</sup>*Independent student of Jizzakh State Pedagogical University*

**\*Corresponding author: Rakhimov Bakhtiyor Khudayberdiyevich**

*\*professor Gulistan state university*

	<b>Abstract</b>  This Article Describes The Psychological Possibilities Of Organizing Scientific Research Work In Higher Education Institutions, The Fact That Scientific Research Activity Is A Factor That Ensures The Intellectual Maturity Of A Student's Personality, And The Specific Features Of Organizing Scientific Research Work In Higher Education Institutions.  <b>Key Words: Students, Youth, Research, Research Work, Scientific Research, Research Work, Organization Of Scientific Research Work.</b>
<b>CC License</b> CC-BY-NC-SA 4.0	

### Introduction:

The issue of mental development of a person has been the focus of attention of thinkers and philosophers, historians, psychologists and pedagogues at all stages of the development of human society. This can be seen, first of all, in the scientific and ethical works created by the scholars of the East.

The views of the encyclopedic scholars - Abu Nasr Farabi, Abu Rayhan Beruni, Abu Ali ibn Sina, Alisher Navai, Abdulla Avloni and others about the role of science in the mental education of a perfect person have not lost their relevance even today.

Scientists G.Yu.Eysenk, R.Z. Asamova, L.S. Vygotsky, M.G. Davletshin, D. Dewey, V. Karimova, A.N. Markova, V.S. Merlin, L.M. Mitina, R.S. Nemov, A. Palmar, V.V. Pospeev, A.A. Rean, I.E. The socio-psychological nature of the organization of scientific research is scientifically substantiated in the studies of scientists such as Rogov, H.A. Ruxieva, S.L. Rubinshtein, Friedman, E. Goziev. They also pay special attention to the issues of professional ability, needs, psychological characteristics of future specialists and the factors influencing it, as well as the influence of the social environment.

Although important scientific and practical conclusions have been obtained from the conducted researches, the issue of preparing students and young people for direct scientific activity has not been fully resolved as a result of scientific researches. In particular:

- the textbooks and training manuals on the preparation for the profession of pedagogy do not include separate topics related to the organization of scientific research work of students and young people;
- special attention is not paid to the principle of acquiring knowledge based on science during the educational process;

- in the program of pedagogical practices, the scientific work of students and young people is not paid attention to;

The analysis of scientific-pedagogical literature on the research problem showed that the lack of scientific, methodological and practical scientific research on this problem is a serious obstacle to achieving certain achievements in this matter.

The purpose of the research is to substantiate the process of directing students to scientific research from a socio-pedagogical and scientific-practical point of view, and to develop scientific-methodical recommendations for directing students to research activities.

Research methods: generalization, analysis, questionnaire, question-and-answer, interview, observation, pedagogical monitoring, pedagogical prognostication, pedagogical experiment, mathematical statistics.

After the independence of our republic, the leadership of our state opened wide opportunities for young people to engage in scientific research in order to strengthen the socio-economic development of our country. Because the development of the country is determined by the social activity and scientific potential of the members of the society. The main goal of increasing attention to scientific research is to make people consciously aware of changes in society and nature, to promote human interests based on its laws, and to form a conscious attitude to national and cultural wealth by creating scientific theories.

In the process of scientific research, emotional perception, abstract thinking, practical testing find their expression. The process of scientific research has a holistic system and is mainly formed and implemented in the process of continuous education. Its initial stage corresponds to the school period. During this period, students are formed with the basic concepts of conducting scientific research. In the next stages, knowledge, skills and competencies are formed. The higher stages of the system represent the practical implementation of conducting scientific research.

Higher education is one of the main stages in conducting scientific research, and students will have clear directions of research activities.

Knowledge is derived from the Arabic language and is a set of knowledge and skills acquired on the basis of reading, learning and life experience; Science [30].

Beruni says in his book "Memorials from the Past Generations": "Pride is in reality to go ahead in good manners and high deeds, to acquire knowledge and wisdom and to be cleansed of existing impurities as much as possible. Whoever has these qualities, the judgment will be in his favor, and whoever does not have them, the judgment will be against him.

Abu Ali ibn Sina calls for the acquisition of enlightenment, which is considered the first criterion for reaching maturity. Because science should serve people, reveal the laws of nature and pass them on to generations. He says that in order to achieve this goal, a person should not be afraid of difficulties. "O brothers! People's heroes are not afraid of trouble. The one who refuses to develop perfection is the most cowardly of people" [31].

The library of the observatory headed by Mirzo Ulugbek is filled with many scientific works, works of world famous people, and the number of books kept there is more than 150 thousand. At that time, more than 100 scientists were organized around Ulugbek in Samarkand, and the observatory also served as an academy. There was a strong connection between the madrasa and the observatory. Some of the scientific staff working at the observatory were teachers at the madrasa. Ulugbek often argued with the students of the madrasa and gave exams. The joint activity of the observatory and madrasa scholars raised star science and mathematics at the Ulugbek Scientific School to the highest level in the Middle Ages.

A. Avloni, thinking about the acquisition of knowledge: "Science is the means, life, leader and salvation of people. If the hand of reason holds the reins of your ego, you will be kept from entering into evil ways. If there is a lot of everything, the price will be cheap, but intelligence will be more valuable the more it increases under the shadow of knowledge and experience.

He understands well the role of science in the development of society. That is why he calls young people to know the secrets of science, to solve the essence of events, to read books. In his opinion, science is dead if it does not serve the benefit of society, if it is not used for the welfare of the people. [3].

Based on the above points, it can be said that inviting young people to learn science was considered one of the leading ideas of the content of the works of Eastern thinkers. Targeted involvement of young people in scientific research works creates a basis for full self-expression as a conscious, socially active participant of the society.

The term dialectic has been used in the past mainly in three senses: firstly, as a tool for reaching the truth by exposing the contradictions in the minds of the interlocutors through debate; secondly, as a form of thinking

that embodies the laws of philosophical thinking; thirdly, as a method used in the process of conducting scientific research in philosophy and other sciences for comprehensive and comprehensive knowledge of things and events.

In the work "Metaphysics", Aristotle put forward ideas about the nature of several pairs of categories, that is, necessity and chance, whole and fragment, singularity and generality, and their interrelationship. According to him, dialectic applies to all sciences. If the four basic rules of logic are not observed in the teaching of each subject, there can be no question of developing scientific thinking. That is, the law of the moment - not to pass on to another before the thought of something is finished; according to the law of non-contradiction, the absence of two conflicting opinions at the same time; the law of exclusion is that at the same time one of two contradictory propositions is always true and the other is false; the law of sufficient reason is to prove one's opinion on the basis of evidence, and correct reasoning requires justification, proof..

Relying on the above points, we can say that the student - young people can thoroughly understand the laws of argumentation, justification, non-contradiction, exception, and truth, and only after that they can think scientifically.

Therefore, the effectiveness of students' organization of scientific research depends on the level of student thinking, and thinking should be scientifically based, independent, and logical.

**Main idea:** Pedagogical scientist E.Z.Usmonova showed the guidelines for opening wide opportunities for the development of thinking as follows:

- 1) the occurrence of a problem and the formation of an intellectual task;
- 2) search for the answer to the task and find it;
- 3) perception of this found answer as the opening of subjective novelty;
- 4) prove the correctness of the obtained answer, justify it to another person, explain it.

A. Choriev in his work entitled "Philosophy of Man" emphasized that "the efforts of researchers studying the problem of man must be subordinated to 2 major poles, the first pole is to ensure the interrelationship of all sciences that study the natural and social essence of man" and the integration of socio-humanitarian and natural-scientific approaches to the human problem. radiates the embodiment.

In his opinion, a teacher who understands the relationship between subjects and things can design his lessons correctly. Only teachers who have developed anticipatory abilities in their minds can develop students' thinking in the educational process. In the anticipic ability of the mind, its three different functions are distinguished: knowing (putting hypotheses, being able to see the future), designing (calculating ideas, preparing the project first in the mind, then in practice), being able to confirm (implementation of goals, plans, programs, concepts).

It is known that during the student period, young people have a strong desire and effort to know the world, philosophical observation, psychological analysis, logical thinking, and development of thinking aspects. At the same time, they have a tendency to fantasy, and this physiological-psychological condition is a factor for the development of thinking, the pursuit of knowledge, and the performance of scientific research. This means that the pedagogical and psychological capabilities of students are greater than children of other ages, and they have a strong desire to learn about the world. Therefore, it serves as the main stage in the formation of students as individuals.

The students of the higher education institution, which we have chosen as the object of research, are knowledgeable, curious, eager for knowledge, morally formed, independent thinkers, and their internal needs are fulfilled at the level of their capabilities.

The development of a student's personality has its own characteristics. "This, first of all, is characterized by an increase in their desire to improve themselves and an increase in their interest in studying. One of the most important features of the student period is the development of the desire to think independently.

Therefore, in this period, instead of giving only theoretical knowledge, it is necessary to pay attention to the formation of reactions to various practical situations, more research, creative approach, and development of thinking. In the world education system, philosophy and psychology are the methodological basis of each discipline. Because all sciences are theoretically based on philosophical laws. Also, scientific thinking is closely related to human psychology and philosophical principles.

Existence comes into being through thought forms. Every student should take into account the essence, diversity, multifaceted features of thinking in their practical activities and consciously follow them.

Realizing the reality is teaching the relevance of education to life. In order for the student's thinking to be broad and comprehensive, the teacher should explain to the students the aspect of education related to life. Only when the learner understands this, he can devote his energy to studying knowledge with interest.

Pedagogical and methodical literature shows that the comprehensive study of pedagogical problems provides opportunities for comprehensive development of the student's personality, increasing the effectiveness of educational work, optimizing the pedagogical process, organizing and managing education on a scientific basis.

Methodical literature mentions two ways of comprehensive study of pedagogical phenomena: a) analysis of interrelated problems within the framework of one discipline according to the nature and purpose of study; b) analysis of the same problem from the point of view of different disciplines.

According to A.I. Kochetov, a comprehensive approach to pedagogical events ensures multi-purpose research, makes it easier to separate connections within the scope of the studied event, and increases the possibilities of delimiting level 2 events that are not related to the problem.

During adolescence, the process of self-realization is characterized by having a personal opinion, independent reasoning, saying that my opinion is right (criticism). Therefore, in this period, studying the psychology of students and conducting classes is an urgent issue. At the same time, the teacher should develop independent thinking by means of different methods, ways, and technology. Psychologist E. Goziev emphasizes that using every opportunity to educate and develop adolescent thinking is an important shift in education: 1) teaching teenagers to correctly define, analyze, compare, abstract and generalize; 2) explain the way to express one's opinion correctly, fluently and clearly; 3) formation of independent judgment and conclusion, reasoning skills. Such forms of thinking develop mental skills and abilities in them, and as a result, development is carried out.

Psychologist V.A. Krutetskiy emphasizes that in order to activate the independence of thinking of a teenager, it is useful to master new educational material in a problematic manner, it consists of 3 stages.

First, the teacher presents a problem to the audience and explains its definition, while the students look for directions to solve the problem. Then the teacher sets the students the task of defining the problem independently, and guides them to solve it. After that, the teacher does not point to the problem, but teaches students to independently analyze, then describe, search for solutions and possibilities.

In fact, the guiding ability of the teacher serves as the main tool in directing students to scientific research work and directing the thinking activity of the student.

The teacher should develop methods of memorizing the topics so that the students become independent thinkers.

Psychologist V. Karimova states that there are eight laws of memory; a) the law of consciousness; b) the law of interest; c) the law of prior knowledge; g) the law of readiness to remember; d) association law; e) the law of succession; j) the law of strong impressions; z) braking laws.

Olima V. Karimova points out that "...in order to become a mature staff, a person needs not only to improve his talent, knowledge and level, but also to be ready for the system of various social relations in the society, to perfectly master the scientific laws and rules of social activity management."

For this, it is necessary to inculcate the spirit of understanding in the students during the educational process. According to the "explanatory dictionary of the Uzbek language", Anglamoq-1. To understand the meaning or reason of words, actions, events and the like, to understand the meaning, essence, listen, know, understand. 2. To understand its true value is to evaluate it.

Hazrat Navoi in his work "Nasayim ul-Muhabbat" shows that the most important value in this light world is knowledge and divides it into three categories: a) repentance; b) science of love; c) science of truth. It is not without benefit that we instill in students - young people, the guidelines for understanding this science of truth, regardless of what science it is. Because this science is the science of understanding and understanding existence with the reasons of the whole.

The results of our research show that in the process of higher education, it is necessary not only to create information and understanding about existence, but also to create conditions and opportunities for self-realization of this world.

During the student period, interest in learning increases only if he can feel the connection between life events and understand them. When a student realizes objective existence, he can generalize his knowledge, systematize it, and master knowledge in depth. This broadens their scientific outlook. Only then can they make their proposal, have an idea, prove it, put forward their hypothesis and views, develop their thinking.

The fact that the organization of scientific research work of students - young people depends on the level of their thinking has been scientifically and theoretically justified by psychologists. In particular, it is defined by psychologists as follows:

Available online at: <https://jazindia.com>

In the researches of psychologist A.V. Brushlinsky, it is emphasized that thinking is the characteristic of searching for and discovering important news, and anticipating hypotheses and theories.

Psychologist S. L. Rubinstein developed the idea of thinking and called it the emergence of subject activity.

E. Goziev defined that "thinking is a mental process that reflects the reality of the environment directly and in general with the help of speech, mental activity aimed at understanding social causal connections, discovering new things and forecasting."

Professor N. Mahmudov said the following about the need to take care of the level of perfection of thinking - independence and regularity, depth and tension, creativity: "If the child's thinking ability is not taken care of, if it is not given a shape and direction, even when the child grows up, it will remain as an opportunity or a system of thoughts in one mold remains as such. Such lazy and lazy thinking cannot be active, mobile, therefore, inquisitive and creative."

According to the scientific research analysis of the Russian pedagogue scientist N.A. Gordeeva, students' scientific work has been the object of various pedagogical and psychological studies in recent years. This object is poorly studied in terms of its complexity and versatility. The study of this problem, especially the development of its practical aspect, is an important factor in the development of students' creative potential.

In order for students to effectively use the rich opportunities of scientific research, first of all, it is necessary to create a system of methods and conditions that are proportional to the character and structure of scientific activity and aimed at the development of personal characteristics.

The service of psychodiagnostics is great in solving these problems. Psychodiagnostics focuses on determining the psychological characteristics of the imagination process in students engaged in scientific research.

It is the study and development of students' creative imagination that, in our opinion, opens up new horizons for increasing the effectiveness of scientific research activities. Because the personality of a scientist is formed during the student period. During the student period, the skills and abilities of reflection, that is, knowing the limits of one's knowledge and being able to go beyond these limits, are manifested.

Independent education plays an important role in the development of researcher qualities according to the results of scientific research of Russian pedagogues E.G. Skribitsky and I.Yu. Skribitskaya.

Independent education refers to purposeful activities carried out by a person aimed at improving his experience in the field of conducting research. The direction and content of independent education is determined by the researcher according to his needs and interests (for example, the task, type of scientific research being solved, formation of research skills, etc.).

As a result of the conducted research, the levels of formation of the researcher's scientific activity were determined as follows:

- low level: it will be difficult to engage in independent scientific activity, the development of management skills will be at a low level;

average level: conscious ability to manage scientific activity is demonstrated;

- high level: accuracy of independent scientific activity, appropriateness to the goal, having management skills that allow building scientific research activity at a higher level and being able to critically evaluate it are manifested.. [29].

Student - the meaning of directing young people to scientific research work, along with the development of the state and society, it should always be assumed that they acquire a certain emotional and spiritual need is scientifically based to a certain extent in the works of the above-mentioned scientists, and the harmony of ideas, social-pedagogical and social psychological cooperation stands out.

The effectiveness of the integration of students' research activities is carried out in the following interconnected directions: psychological, theoretical-methodological and technological.

Psychological orientation. Successful implementation of scientific work depends on many factors, including the individual and psychological characteristics of the researcher.

Ability is a general psychological concept, which means the sum of individual psychological characteristics of a person and is an important condition for successful implementation of this or that activity. Conscious activity, conducting research with an understanding of the essence of a scientific problem, criticality, independence, volition, determination and other qualities of a person are among them. Among students engaged in research activities, such qualities are very important for any specialist. To determine the research problem, the student asks himself: "What do I want?", "Why exactly do I want this?" should ask questions.



Only then will he psychologically prepare himself to test hypotheses and find ways to prove the truth, to carry out serious research.

The productivity of scientific activity is closely related to the capacity of memory. Memory refers to the process of organizing and preserving past experience, allowing it to be reused or brought back into consciousness during activities.

Memory is characterized by the following qualities: speed of recall, size of recall, length of recall (duration) and accuracy. Especially important is the ability to remember only the most necessary things, and to forget the less necessary and less desirable ones until the time is right. Reviewing the appropriate sections of the bibliographic index, reference journals, systematic and reference catalogs in the libraries will help in the development of the orientation of the memory and the ability to discover. In addition, memory can be developed on the basis of various exercises.

Observability in the research process is one of the main empirical research methods, which means the ability of a person to see important, characteristic, including almost invisible properties of objects, events and processes.

The theoretical-methodological direction includes the following: knowledge of certain methodological norms or rules by the researcher, scientific knowledge; the ability to use them in the process of solving research tasks; the ability to scientifically substantiate certain concepts, forms and methods (methods) of knowledge, management and design, critical thinking and creative use; to have basic research approaches.

Technological orientation includes the following skills: ability to use goal-oriented mental operations when conducting research; ability to creatively solve various research tasks; addressing issues that matter; use of information tools in solving research tasks; carrying out expertise. In addition, to have rational methods and methods (methods) of conducting scientific research; have improved written and oral communication. Ability to transfer acquired knowledge to new conditions in a goal-oriented manner. Observing the hygiene of mental work and its purposeful organization, rationally spending one's physical and spiritual energy, adequately evaluating the quality of the research results, etc. The researcher's professionalism in his field of activity plays an important role in conducting scientific research.

### **Table 1**

Student - specific features of the formation of activities of young people related to scientific research work

1. High level of knowledge
2. Having scientific thinking
3. High analytical thinking ability
4. High synthetic thinking ability
5. Strength of research ability
6. Superiority of logical thinking ability
7. Desire for innovation
8. Scientific creative activity
9. Having the ability to search
10. Being creative
11. Having the ability to discover
12. Being able to evaluate social situations
13. Comprehensiveness of the scientific outlook
14. Being able to think independently and freely
15. Being able to correctly assess the problem situation
16. Active participation in social relations
17. Organization and initiative
18. Determination of the sense of responsibility
19. The ability to engage in a scientific debate, the strength of the ability to argue and prove
20. Extensive involvement in the work of scientific and technical and scientific societies
21. Devotion to scientific work, love for a particular science
22. Formation of research skills and qualifications
23. Honesty and demandingness in science
24. Being able to put scientific knowledge and discoveries into practice
25. Correct attitude to criticism
26. Social - political activity
27. Self-confidence

28. The culture of scientific research is highly developed

It is impossible to put an end to the specific features of the formation of the activities of students and young people in relation to scientific research, which are expressed in the table. Because they improve over time.

### Conclusion:

1. The use of the works of Eastern thinkers in directing the student-young people to scientific research works creates a basis for purposeful involvement of them in scientific research works, for them to fully manifest themselves as conscious, socially active participants of the society.

2. The current tasks of the councils directing young people to scientific research work are as follows:

- to select talented young people based on a special methodology in order to attract them to scientific research works;
- to determine students' scientific topics;
- to help them hold scientific-practical conferences on common topics at the republican, regional and university level;
- organization and management of international and national scientific conferences and symposia of students and young people;
- in the current conditions of globalization in the field of science and information technology, drawing up agreements for establishing contacts and conducting scientific activities in cooperation with countries of the Commonwealth of Independent States, higher education institutions and organizations and councils of young scientists abroad;
- raising the relationship between the teacher and the student in the educational process to the level of scientific-pedagogical cooperation, ensuring that the student becomes a subject of the educational process on an equal footing with the teacher.

### Reference:

1. Merlin V.S. Psychology individuality. Pod ed. E.A. Klimova. - Voronezh. NPO "Modek". 1996.-448 p.
2. Mitina L. M. .Uchitel kak lichnost i professional (psychological problems). - M.: Delo. 1994.-215 p.
3. Hasanboeva O., Hasanboev J., Hamidov H. History of pedagogy: Study guide.- T.:Teacher, 1997.-248 p.
4. Mahmudov M. Improvement of mother tongue and creative thinking.-T.: 2001.-3-p.
5. Nemov R.S. Practical psychology. - M.: 1998. - 320 p.
6. Palamar A. Mudrost obshcheniya.- M.: Molodaya gvardiya, 1990.-336 p.
7. Pospeev V.V. Diagnostics is human. Kn.I. - Mn.: Rec. ART. 1996. -208 p.
8. Bakhtiyor Rakhimov, Guli Isaeva, Dilfuza Nosirova, Shoir Fayzieva, Munavvar Erkaeva. Development of Students' Self-Educational Activities in the Conditions of Education Informatization. <https://www.psychosocial.com/article/PR270787/18961>
9. Rean A. A. i dr. I. Psychology and pedagogy. \Rean A. A., Bordovskaya N. V., Rozum S. I. - SPb.: Peter, 2001. - 432 p.
10. Rogov E.I. Nastolnaya kniga prakticheskogo psychologa v obrazovanii.-M.,1995.S-570.
11. Ruxieva Kha.A. Psikhologicheskie osobennosti self-management of uchebnoy deyatel'nosti studentov: Diss. ...kand.psychol.nauk.-Tashkent, 1993.-132p.
12. Rubinstein S.L. O myshlenii i putyakh ego issledovaniya. - Moscow: APNRSFSR.
13. Skribitsky E.G., Skribitskaya I.Yu. Formirovanie komponentnosti nachinayushchego issledovatelya //J. Innovation and education. 2007. No. 9. - S. 80-90.