

ISSUES OF FORMATION, EDUCATION AND DEVELOPMENT OF RESEARCH CAPACITY IN STUDENTS

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ABSTRACT

The modern education system requires the further improvement of the mechanisms for educating future specialists in research skills based on creative approaches and the innovative system of their implementation. From this point of view, education of the research ability of specialists based on a creative approach in the field of education is of particular importance in creating innovations, creating intellectual resources of socio-economic development and expanding competitive training opportunities by educating cognitive and divergent thinking skills based on modern pedagogical processes that create new knowledge.

KEYWORDS: *Creative Approach, Research Ability, Education Of Research Ability In A Student, Research Activities Of Future Teachers, Development Of Research Skills Of Students Based On A Creative Approach, Development Of Creativity And Research Skills Of Students By Means Of Interactive Educational Methods And Technologies.*

INTRODUCTION

In the conditions of wide implementation of the information environment in our republic, based on a creative approach, opportunities were created to develop a stable interest of future teachers in research activities based on advanced foreign experiences, and creativity and innovative thinking were recognized as an important indicator. The material and technical base, the base of regulatory and legal documents, which ensures the training of research ability in future teachers based on a creative approach and the formation of research qualities, has been completely updated. In the Strategy of Actions for the further development of the Republic of Uzbekistan, "stimulation of research and innovation activities, creation of effective mechanisms for the implementation of scientific and innovation achievements, organization of specialized scientific and experimental laboratories, high technology centers and technological parks at higher educational institutions and research institutes" were defined as priority tasks. Tasks in this regard serve to scientificize the content of educational processes, to form cognitive and divergent thinking of students, and to develop creative research activities.

The following scientific results were obtained in the scientific research conducted in the world on education of research ability and development of creativity among future teachers in the higher education system: the model of education of the student's research ability was improved

on the basis of factors of increasing the competence of self-development (Massachusetts Institute of Technology, USA); the process of training the future teacher's research ability is improved on the basis of pedagogical design methods affecting intellectual development (Eastern European Scientific Journal, Germany); psychological tests for determining the level of formation of research ability were developed (Russia), the technology of forming the creativity of future teachers in the continuing education system was improved based on the clarification of the creators of creative potential (Kazakhstan).

In the higher education system of the world, research is being carried out on the development of research skills of future teachers, including in the following priority areas: mastering of technologies of organizing students' research activities by future teachers in the higher education system; increasing the role of innovative educational technologies in training students' research ability; integration of pedagogical opportunities of classroom and non-auditory activities in the process of preparing students for research activities.

Tasks of the research: clarification of the content of the concepts of "creativity" and "research", pedagogical-psychological features and factors of the development of creative abilities of a person;

improvement of the criteria and mechanisms for determining the development of research skills in students based on a creative approach;

improving the integrated methodical system of developing students' creativity and research abilities by means of interactive teaching methods and technologies;

improvement of mechanisms for diagnosing and monitoring the level of training of research ability in future teachers based on a creative approach;

development of scientifically based proposals and recommendations on the development of creativity and research abilities of students by means of interactive educational methods and technologies.

The main part. In the process of scientific research, emotional perception, abstract thinking, practical testing find their expression. The research process has a holistic system and is mainly formed and implemented in the process of continuous education. Higher education is one of the main links in carrying out scientific and research work, practical researchers will have specific directions of research activity in HEIs.

The development of a student's personality has its own characteristics. This is characterized, first of all, by their increased desire for self-improvement and increased interest in learning. One of the most important features of the student period is the development of the desire to think independently. Awareness of existence arises 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 must make students understand the aspect of education related to life. Only if the learner understands this, he can devote his energy to studying knowledge with interest. Pedagogical and methodological 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. The fact that the organization of research work of future teachers depends on the level of their thinking has been scientifically and theoretically substantiated by psychologists. In particular, in the researches of the psychologist A. V. Brushlinsky, it was specially emphasized that thinking is the characteristics of searching for and discovering important news, 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 in the environment directly and in a general way with the help of speech, mental activity aimed at understanding social causal connections, discovering new things and forecasting." , if it is not given shape and direction, it will remain as a possibility or a stereotyped system of thoughts even when the child grows up. "Such lazy and lazy thinking cannot be active, active, therefore, inquisitive and creative."

The need to always consider that the meaning of directing future teachers to scientific and research works is to acquire certain emotional and spiritual needs along with the development of the state and society. issues of psychological cooperation are covered. The dissertation describes the following criteria that determine the level of education of future teachers' research skills:

- to educate the research ability of future teachers, to understand the content of national and universal human values, to reflect the content of national and universal human values in research activities, to realize that a person is the greatest value in research activities, to be creative, to have analytical thinking in research activities, to have synthetic thinking, to have scientific - drawing final conclusions based on the results of research work, effective implementation of research results in practice.

Based on the above analysis, the research activity in the dissertation always requires a creative approach, and based on the above analysis, training the research ability of future teachers based on a creative approach is one of the types of educational activities, which allows students to continuously discover new things for themselves. It is led by the idea of developing students' creativity and innovation ability. The ability to research is seen in the student's new scientific ideas and independent decision-making. The content of training the research ability of future teachers based on a creative approach is focused on self-realization of students, identification and manifestation of their inner potential, students work hard on research like a creator, and this work attracts with its novelty, creative application, and unusualness. .

Based on the study of educational practice, special attention was paid to the professional training of the student from the moment he was admitted to the studentship, along with the in-depth study of the scientific-theoretical foundations of each subject. In any research work, the researched scientific phenomenon has been clearly described. The results of scientific research were presented coherently through logical reasoning and observation.

On this basis, the development of a program for the development of pedagogical research, teaching-methodical manuals, and the implementation of fundamental research work by conducting experimental work lead to the improvement of scientific activity.

Based on the above conclusions, a special course program aimed at acquiring knowledge, skills and qualifications of future teachers related to research work was developed and implemented in

the educational process. Based on the special course, students' scientific worldview and scientific creative activity were formed.

The 21st century is the century of intellectual development, the advanced creative people living in it achieve their improvement as a result of their intellectual and creative activities. Today, every citizen of the society lives under the influence of scientific and technical achievements. This is also important because techniques and technologies are improving and developing day by day, and as a result, the need to train mature specialists is also increasing.

Based on the approach, it consists of a set of organizational, economic, socio-pedagogical rules for training research skills. As a result of the provision of special forms, methods and tools of research activity, it serves the formation of research skills in students. Mental activity is directly related to scientific and creative activity, it is the activity of creating new material and spiritual benefits of a person. On the other hand, research and creative thinking require a modern specialist to be able to choose the optimal solution of prospective tasks by using the achievements of science, and to carry out experimental work in his practical work.

Therefore, in the development of society, the development of science and the desire to improve it, researches were considered one of the high indicators of the scientific and creative development and culture of every society.

A number of leading higher education institutions in our republic have perfectly formed scientific schools, where many scientific personnel are being trained. However, considering that such scientific schools do not exist in all higher education institutions and that some capable and talented students receive education in these higher education institutions, it is seen that there is a need to form a system of scientific personnel training that is unique to all higher education institutions.

In the step-by-step system of directing students to scientific-research in higher education institutions, proposals were made to organize the process of preparing them for scientific-research work and cultivating them as personnel with scientific potential in the following four stages.

There are a number of professional qualities that students and young people need to acquire, and if they are not reflected in the teaching activity of young people in the future, the lessons will remain ineffective in some aspects. Because every quality of the teacher's profession should ensure the achievement of effective results and influence the development of the student at one or another level. That is why the professional and pedagogical requirements for the teacher are expressed in such important professional qualities as "scientific creativity", "organization", "research", "connection between theory and practice". The higher education system requires the student to ensure the formation of all necessary professional qualities, such as organization, practicality, research, creativity. Orientation of students to scientific research in the field of pedagogy and psychology helps the student to master the laws of scientific research in depth. These disciplines expand the possibility of training students' research activities based on creative approaches.

The results of the process of quantitative comparison of scientific research results, the level of orientation of future teachers to scientific research work in experimental and control groups was

determined on the basis of specially prepared test questionnaires on the solution of the problem of research work.

The comparative analysis of the results of experimental work carried out in a number of higher education institutions on the orientation of future teachers to research work is reflected in the diagram below.

Through this questionnaire, in chapter 1 of our dissertation, the current state of orientation of future teachers to research work was determined.

A comparative analysis of the results of experimental work conducted in a number of higher education institutions on training the research ability of future teachers based on a creative approach was made. Mathematical-statistical analysis method was used in the analysis of the results of the pedagogical experiment based on the results of the experimental work conducted with the students regarding the orientation of the students to research activities.

From the obtained results, it can be seen that the criterion for evaluating teaching effectiveness is greater than one and the criterion for evaluating the level of knowledge is greater than zero. It is known that the mastery in the experimental group is higher than the mastery in the control group. From this, it is possible to draw a conclusion about the effectiveness of the experiment-testing activities conducted in connection with the orientation of students-young people to scientific and research activities.

- As an important factor in educating the research ability of future teachers based on a creative approach, scientific analysis of the values in society and social activity based on achieving social and personal advantage, being able to independently determine one's goals and determine the ways to achieve them serve as a source of confidence in one's place in society.

- It is necessary to take into account the integrity and unity of historical-philosophical, national, pedagogic-psychological factors, based on specific methodological approaches and theories, in training the research ability of future teachers based on a creative approach.

- The results of the research are a holistic approach to the education of research ability among students of the pedagogical higher education institution; to consider the learner as a person who needs pedagogical support and requires an individual approach; a differentiated approach in choosing the content, forms and methods of scientific and creative work; harmony with nature; harmony with culture; shows that it is necessary to be based on principles such as a humanistic approach to the organization of relations in the educational process, a value-meaningful approach.

- The diagnostic system of training the research ability of future teachers based on a creative approach was improved based on the development of a set of pedagogical and psychological diagnostic methods by identifying informational-cognitive, personal value-oriented, emotional-expressive and active-creative criteria and appropriate indicators, and within the framework of the research, students' scientific-creative taking into account the levels of their activity, the model of elements that allows them to develop their research skills; the system of socio-pedagogical tasks for solving critical situations was defined.

REFERENCES:

1. Mirziyoyev Sh. Today, it is more important than ever to focus on enlightenment. — <https://www.gazeta.uz/uz/2016/10/19/ustuvor/>
2. Action strategy on five priority areas of development of the Republic of Uzbekistan in 2017-2021. - strategy.regulation.gov.uz/uz/document/2.
3. Karimova V., Nishonova Z. Connection between independent creative thinking and emotional, volitional and intellectual feelings of a person. //Public education. - Tashkent, 2001. - No. 3. - B. 64-69.
4. Nazarova B.A. Vospitanie issledovatel'skie kompetentnosti u budushchikh uchiteley v protsesse nepreryvnogo obrazovaniya //Continuing education. – 2017. – No. 1. – S. 60-64.
5. Nazarova B.A. //Scientific-theoretical foundations of training research ability in future teachers based on a creative approach// monograph T.: "Fan and technology" publishing house 2017.164b.
6. L.M. Karakhonova. Peculiarities of using modern educational tools to increase the effectiveness of teaching the natural sciences and direct students to independent activities // Asian Journal of Multidimensional Research Vol. 11, Issue 5, May 2022 SJIF 2022 = 8.179 <https://tarj.in> DOI: 10.5958/2278-4853.2022.00106.9.
7. L.M. Karakhonova. General secondary schools requirements for the introduction of informed educational resources for the development of natural sciences // ACADEMICIA: An International Multidisciplinary Research Journal // Vol. 12, Issue 05, May 2022 SJIF 2022 = 8.252. <https://saarj.com/> DOI: 10.5958/2249-7137.2022.00542.0