

ON THE TECHNOLOGY FOR THE DEVELOPMENT OF SCIENTIFIC AND CREATIVE ACTIVITY IN STUDENTS

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***Abstract.** The article describes the essence and purpose of developing scientific and creative activities of students and the main factors of developing scientific and creative activities based on person-oriented education. The main factors determining the nature of scientific and creative activity are divided into groups such as philosophical and socio-economic activity and psychological and pedagogical activity, and their measurement categories are developed.*

***Key words and phrases:** educational quality, scientific and creative activity, category, criterion, discovery, invention, design, intuitive thinking, creative hypotheses.*

INTRODUCTION

Implementation of the reforms that are being carried out to fundamentally change the education system in Uzbekistan and creating comprehensive conditions for a deep understanding of the nature of the documents adopted in this regard by the general public - state administration, law enforcement agencies, education - defined as the most urgent tasks of employees of educational institutions. If the task of reforming the education system is successfully solved, the social and political climate will change dramatically, and democratic values will be established in people's minds. A person consciously determines his place in society [1].

The teachings of the great enlightener A. Avloni in the chapter of education that "Education is for us either life or death, or salvation or destruction, or happiness or disaster" were important and relevant at the beginning of our century. is so important every day.

In Al-Farabi's work "The City of Virtuous People", it is emphasized that every citizen of the society is a virtuous person, regardless of his position, position, that is, who he is. A virtuous person is a person who knows all the laws and regulations of his country, follows them, is a master of his profession, and sacrifices his life for the Motherland when necessary.

Disterverg writes about student education as follows: "Teach the student to work, teach him not only to love work, to be in harmony with it in such a way that work is absorbed into his body, teach him to , for him, the inability to learn something without his own strength should be considered unthinkable" [2].

In the chapter on education, Spencer says, "The process of self-improvement should be given a large place in the work of education. "Humanity has progressed only through independent learning." Therefore, educational technologies should mainly focus on the formation of competencies such as self-development, activation and improvement, self-assessment in students [3].

The above ideas about student education give one dictionary meaning, that is, the main direction of education is the development of thoughts and thinking in students, their ability, o It should be aimed at forming feelings of confidence in one's own knowledge and teaching them independence. This directly determines the need to develop scientific and creative activity in future specialists [4].

RESEARCH METHODS

In the research process, the analysis of scientific and teaching-methodical literature, pedagogical observation, comparative analysis, generalization, pedagogical experiment-test and foresight methods were used.

RESEARCH RESULTS AND DISCUSSIONS

Currently, in the educational system of developed countries, great attention is paid to such educational and pedagogical technologies. Such modern innovative technologies include educational technology, technology of step-by-step formation of mental activity, technology of collective interaction, technology of full mastery, technology of different levels of teaching, adaptive teaching. technology, programming-based teaching technology, problem-based teaching technology, modular teaching technology, technology for developing creative activities of future specialists, project style technologies [5].

Of course, the application of such pedagogical technologies is necessary to correctly assess the knowledge, learning and skills of students in the educational environment, to clearly determine the level of formation of professional competence in them and, accordingly, to recommend them to work in production enterprises. is one of the important conditions for ensuring Therefore, in modern education, more attention is paid to the type of education focused on the individual. One of the central concepts of humanistic (humanitarian) pedagogy is self-activation in person-oriented education, or the awakening of all one's potential abilities and natural talent and its application in life, self-activation, self-confidence plays an important role [6]. Today, ensuring the quality of education at the level of requirements can be achieved only

through the wide application of innovative pedagogical technologies based on the development of independent creative and scientific abilities of students, self-improvement and assessment in the educational process.

In this, the use of technology for the development of scientific and creative activity has an important place. Here we will focus on the main factors determining the essence of scientific and creative activity, measurement categories, creative activity strategy, tactics, methods of developing the experience of creative activities of future specialists, and the method of group stimulation of creative research [7].

It is recommended to classify the main factors determining the essence of scientific and creative activity as follows:

Philosophical and socio-economic activity. Creative activity is creating something new that is different from the existing one. Its measurement categories include the following [8]:

- discovery - identification of features and phenomena with previously unknown objective;

- invention - an innovation, decision, technology, etc., which is oriented towards the solution of technical problems and has positive significance in production.

- a rationalization proposal - a solution to the tasks of ensuring the efficient operation of previously known and currently applied technology in other new conditions;

- design - the process of building and creating a certain object based on two stages.

The design process can be carried out in two stages:

1. Initially creating the project in mind, preparing its drawings and technical documents.

2. Practical preparation of the project (preparation of details and parts, their processing, assembly and creation).

3. Design - artistic design of an object based on certain aesthetic characteristics.

Psychological-pedagogical activity is a creative activity in the form of new knowledge, learning and skills, which is previously unknown for this subject. Its measurement categories include the following [9]:

Intuitive thinking is a heuristic process, the creative ability to reach the truth (find a solution to a problem) without any evidence, without any evidence, which is not logically related or sufficient to draw a logical conclusion. the process of determining a solution to a problem based on research.

Intuition - relies on a large amount of knowledge and evidence accumulated during the course of theoretical and practical activity of the subject.

Creative hypotheses - the ability to imagine and hypothesize about objects and processes that a person has not seen in his personal experience or does not exist at all at the moment.

It should be noted that the technology of development of scientific and creative activity in higher education is the content of training specialists, taking into account the abilities and interests of students, designing the content in accordance with the purpose of education, and applying pedagogical methods, forms and teaching methods. is a system of interaction between a teacher and a student, which is implemented on the basis of psychological, general pedagogical, didactic and personal methodical procedures [10].

CONCLUSION

Development of scientific and creative activities of students leads to development of scientific and creative competence in them. The role of this technology in improving the quality of education in higher education, its advantages and some disadvantages, improvement of methods of application in the educational process is one of the urgent and modern tasks. Also, this technology is a system of design and practical application of this technology, which provides a high level of efficiency, consists of pedagogical laws, goals, principles, content, form, methods and teaching tools and methods of education. The content of the technology for the development of scientific and creative activity should be aimed at the formation of professional competence in students, as well as the formation of the culture of working in a team, social competence related to the organization of joint activities. In addition to this technology, it is desirable to ensure interdisciplinarity in the use of this technology, to use the knowledge obtained from other disciplines, and to create an opportunity to develop competence related to other fields of knowledge and other activities.

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