The importance of developing technical creativity in students in technology lessons

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ABSTRACT

The article reveals the theoretical foundations of technical creativity of students. One of the main tasks facing pedagogical science and practice today is the task of developing a creative personality: disclosing the essential forces, creative principles of a personality and creating conditions for their implementation. The role and importance of a creative, proactive and entrepreneurial personality in the framework of the subject "Technology" activates the mental and practical activities of students. At the same time, special attention is paid to the creation of creative projects of students, which should contribute to their successful social adaptation in their future professional and creative activities.

Keywords: creativity, thinking, science, technology, learning, ability, pedagogy, activity, invention, process.

I. Introduction

Creativity is an activity that generates something qualitatively new, which has never existed before, it is a product of human creation, it is the result of an activity that is embodied in reality. Currently, the society in which we live experiences a great need for an active, creative person who has individual creative qualities that are so necessary to solve these problems. Therefore, in our country, effective work is carried out to ensure healthy growth, quality education and harmonious development of the younger generation, as well as the implementation of the "Five Important Strategies" to comprehensively support the interest of young people in culture, art, sports, information technology and increase interest in reading books.

In the Resolution of No. 23, January 18, 2021, of the Cabinet of Ministers of the Republic of Uzbekistan "On Approval of the Concept for the Development of State Youth Policy in Uzbekistan until 2025", it was approved, cardinal reform and further development of the youth support system 2021 was declared in our country "The Year of Support and promoting the health of young people".

II. Main part.

In modern conditions, philosophers, sociologists, teachers, psychologists pay attention to the problem of creativity and creative personality. It has been convincingly proven that the makings of creative abilities are inherent in any person, any normal child. The difference lies only in the scale of achievements and their social significance.

The conclusion of psychological and pedagogical science that creative abilities must be developed from an early age is important. In
pedagogy, it is considered proven that if one does not begin to teach creative activity from a sufficiently early age, then the child will suffer damage that is difficult to compensate for in subsequent years.

The development of creative abilities has an invaluable beneficial effect on a person's personality. First, it helps to know yourself and your true nature. Secondly, take a fresh look at the world around you and change your thinking. Having creative abilities will not necessarily make you an artist and a writer, but it will help in self-development, will be useful in work, study and communication with people.

As G.S. Altshuller asserted, “Everyone has creative abilities, but the creative“ genetic treasure "will not open by itself until a need arises in society and the individual has an opportunity for realization". The main thing is not the development of abilities, but the creation of motivation for creativity and mastery of the technology of creative labor. The main way of developing a creative personality is self-improvement. The role of the teacher is reduced to convincing the individual in the naturalness of the process of creativity and teaching him, in supplying the individual with the technologies of creative work.

Technical creativity is associated with the practical (technological) transformation of reality. It is close in its psychological characteristics to scientific creativity, but it also has differences.

1. It is based on visual-figurative and visual-effective components of thinking.

2. The process of technical creativity is expressed in invention, design, and its product is the invention of mechanisms, structures that meet the needs of practice. Hence its rationality and utility.

3. What is invented does not exist before its creation, although it is based on the already existing technical basis, on the achieved level of technical progress.

Students are involved in creative work in connection with the study of sciences, acquaintance with industrial production, the achievements of science and technology. Most often, technical creativity is manifested in the design of models, devices, mechanisms, simple machines, and other technical objects. This type of activity is carried out mainly in technology lessons. In order to see the result of their creative works, students must go through several stages in order to achieve the desired result. At all stages of work, we must clearly realize that the main expected result is the development of creative abilities, the acquisition of new knowledge, skills and abilities by the student, create with our own head and hands - a craft, a model, a project, the second, most important - pedagogical: invaluable in educational terms experience of independent, creative, research work, new knowledge and skills that make up a whole spectrum of mental neoplasms that distinguish a true creator from a simple performer.

Technical creativity is of great importance for the formation of technical concepts, spatial representations, the ability to compose and read drawings and diagrams. In the process of technical creativity, students inevitably improve their skills in the possession of machine tools and tools. Technical creativity is of great importance for expanding the polytechnic horizons of students. In the process of creative technical activity, students are faced with the need for additional knowledge about technology: in the study of special literature, familiarization with the latest technology, consultations of specialists.
III. Material method.
In addition to feelings that stimulate creative activity, there are feelings that inhibit the creative efforts of students. The most dangerous enemy of creativity is fear. Fear of failure constrains imagination and initiative. The second enemy of creativity is too high self-criticism. There must be some balance between giftedness and self-criticism, because overly picky self-esteem can lead to creative dead ends.

The third enemy of creative thinking is laziness. When a person wants to do something, he must certainly start. The truth is simple: start, continue, and finally finish. These three stages are psychologically unequal and require different volitional efforts. Sometimes the final stage is the final stage - completion.

Also, it should be noted that there is a contradiction in the professional training of teachers in the subject area "technology" needs a systematic solution to the problems of teaching technical creativity, and on the other hand, did not receive a proper comprehensive substantiation, didactic foundations of teacher training for the development of students' technical creativity.

Conclusion.
Therefore, we have a number of tasks for teaching students the basics of technical creativity and preparing them for the leadership of students' technical creativity will, to a large extent, be an effective process of forming a teacher's personality if:

- To develop a scientifically grounded pedagogical system for teaching students technical creativity;
- To develop the process of implementation at three possible levels of its practical implementation: the level of implementation of technical ideas, the level of pedagogical synthesis and the level of the integrity of the process, directly related to each other, as system characteristics of the content and procedural aspects of creative teaching in the fundamentals of technology and technology;
- To develop creative technical tasks organically related to the content of general technical training of students;
- To identify the main areas and directions of creative technical activity of students and methods of increasing its efficiency in the search for inventive solutions and modeling of technological processes;
- Identify the main stages and conditions of creative activity of students in the design of technical objects, the search for inventive solutions, modeling of technological processes;
- To carry out practical activities of students in training workshops and in the process of technological practices, taking into account the implementation of creative ideas and solutions in technical objects;
- To prepare students to guide the technical creativity of students.

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