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# MODERN DIRECTIONS OF TECHNOLOGICAL SCIENCE AND PROSPECTS OF THEIR ORGANIZATION

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## ABSTRACT

In this article, in the continuous education system of our Republic, the training of competitive specialists in various fields, the creation of conditions for them to acquire high knowledge, skills and qualifications, and the training of highly qualified specialists in the process of production, the science of technology about the importance of.

Currently, when analyzing the educational system of a number of developed countries, serious attention is paid to technical and technological processes, it is proved that the development of any country depends on the production sector, and the development of the production sector depends on qualified specialists. stated.

**Keywords:** Socio-economic, spiritual, career orientation and technical creativity, designer, technological.

## INTRODUCTION

The issues of effective organization of technological education; formation of general professional knowledge and skills in students; improvement of the vocational education system; improvement of pedagogical skills of teachers of technological education were studied by the following scientists:

R.Kh.Djuraev, U.N.Nishonaliev, U.Sh.Begimkulov, V.P.Bespalko, P.T.Magzumov, R.K.Choriev, N.Shodiev, A.R.Khodzhaboev, A.Parpiev, O.K.Tolipov, A.T.Malenko, N.Sayidahmedov and others.

U.Nishonaliev, having studied the training of teachers of technological education by historical periods, created a model of professional activity of a teacher of labor education.

Begimkulov U.Sh. Researched the theory and practice of organizing and managing the informatization of pedagogical educational processes.

In the research of A.R. Khodjabaev, the scientific and pedagogical foundations of the development of the educational and methodological complex for the training of teachers of technological education were studied in depth from a scientific and methodological point of view, the role and content of the components of the educational and methodological complex model for the training of teachers of technological education were determined in the educational process, and their implementation was carried out in the educational process.

O.K. Tolipov studied the pedagogical foundations of improving the general professional training of future teachers using simulators and developing them on the basis of pedagogical technologies.

Choriev R.K. Formation of professional and methodological qualifications of engineering teachers.

Researchers who paid attention to the scientific and theoretical substantiation of improving the training of teachers of technological education: P.R. Atutov, P.N. Andrianov, Yu.K. Vasilev, V.A. Slastyonin, D.A. Tkhorzhevsky, A.I. Vorobev, N.E. Alekseev, P.T. Magzumov, K.D. Davletov, Zh. Ramizov, I. Karimov, R. Sarsenboeva, S. Akhmadaliev, B. Doniev, A. Parmonov and others.

On the issues of perspective and development stages of distance learning technology based on information technologies and the creation of its educational support: Sh.S. Sharipov, A.A. Abdukodirov, N.A. Muslimov, Kh.F. Rashidov, J.A.Hamidov, D.M.Sayfurov, U.Yuldashev, N.I.Taylakov, D.N.Mamatov and others.

Issues of creating simulation laboratories, virtual stands and laboratories and their application in the educational process: S.S.G‘ulomov, A.Kh.Abdullaev, S.A.Usmanov, F.S.Turabekov and others.

Issues of creating and using electronic learning tools: A.Parpiev, L.Kh.Zayniddinova, G.V.Ivishina, A.N.Tikhonov, N.A.Muslimov, Q.T.Olimov, J.A.Hamidov, N.I.Taylakov, D.N.Mamatov and others

Issues of teaching labor and vocational education subjects based on national and spiritual values researchers: Rakhimov B.Kh Ashurov N.R. Ibragimova G.Kh., Salikhova M.A., Khaydarov M.E. and others.

Tolipov Otkir Karshievich conducted doctoral research on the topic of pedagogical technologies for the development of general and professional skills and qualifications in the higher pedagogical education system, and managed to develop effective pedagogical technologies for the development of general and professional skills and qualifications in future teachers of labor and vocational education based on the requirements of socio-economic and spiritual reforms being implemented in society.

Muslimov Narzulla Alikhanovich completed his doctoral thesis on the theoretical and methodological foundations of professional formation of a vocational education teacher, researching the problems of professional formation of future teachers of vocational education.

Sharipov Shavkat Safarovich conducted a scientific study on the theory and practice of ensuring the continuity of students' professional creativity (13.00.08 - Theory and Methodology of Vocational Education 2012), and created a scientific-theoretical and organizational-methodological basis for the mechanism of designing and implementing creative pedagogical technologies for the continuous development of students' professional creativity in general secondary and vocational education.

Magzumov Pulat Teshaevich conducted a study on the formation of pedagogical conditions for the orientation of schoolchildren to a profession (on the example of the work on choosing a profession for students in grades IV-VIII in Uzbekistan).

Ismoilov To'ychi Jabborovich defended his scientific dissertation on the topic of the scientific basis for the development of technical creative abilities of future teachers of labor education (Tashkent, 1995), and managed to develop scientific and pedagogical foundations for the development of technical creative abilities of future teachers of labor education.

Zoyirov Kamoliddin Abdukhakimovich conducted a candidate scientific research on the topic of the polytechnic basis for the formation of design and technological knowledge and skills of future teachers of technological education.

Turabekov Farkhod Sanakulovich completed his dissertation on the topic of the methodology for using information technologies in the process of training future teachers of labor education, contributing to the development of scientific and methodological foundations for the use of information technologies in the process of training future teachers of technological education in higher pedagogical educational institutions and determining the effectiveness of the methodology for their application.

Abduraimov Sherali Saydikarimovich (Doctor of Philosophy (PhD) dissertation 2017) achieved improvement of pedagogical opportunities of cross-sectoral integration in ensuring the quality of training of vocational education teachers on the topic of improving pedagogical opportunities of cross-sectoral integration in ensuring the quality of training of vocational education teachers.

## ANALYTICAL CONCLUSION

As can be seen from the above analysis, in the research conducted on the formation of the subject of technological education, in the research conducted on the development of labor, vocational education and technical creativity, many works have been carried out to guide students to the profession and improve their technical creativity skills. However, we see that their implementation is not sufficiently implemented due to the fact that the material and technical base in places does not meet the requirements and for other reasons.

## ANALYTICAL RECOMMENDATIONS

- It indicates the need to improve the professional readiness and creative activity of future teachers of technological education
- Take into account the introduction of modern production technologies in the development of DTS and science programs;
- Improve the effective use of ICT in teaching technological education;
- Develop scientific research on design creativity;
- Introduce virtual laboratories in technological education;
- Pay attention to research aimed at the use of polymer and plastic materials in technological education;
- We recommend the implementation of tasks such as developing the competence of future teachers of labor and vocational education.

Technical creativity in the past had an individual spontaneous character. There were no extracurricular activities, technical creativity circles, at all. Students were engaged in creative activities of their own free will. The beginning of teenagers' engagement in technical creativity coincided with the period of the former Soviet Union. The activity of student and youth technical creativity can be divided into the following stages:

- (1920) the emergence of a labor school, the organization of a youth pioneer organization;
- (1923) deepening the country.
- finding new forms of organizing extracurricular activities on the basis of mass propaganda of scientific and technical progress (1926);
- (1932) the period of acquiring the necessary development skills of students during the years of the Great Patriotic War; the reduction of mass production workshops in the last years of the

Great Patriotic War; the organization of polytechnic education and training workshops led to the organization of extracurricular activities in technology. It was further improved on the basis of the law aimed at developing public education and strengthening the interaction of school and life.

- (1960s) conducting an examination of school and extracurricular organizations for the inventiveness and rationalization of students;
- (1967) participation in scientific and technical creativity competitions of young people;
- (1976) the emergence of a single state system of scientific and technical creativity of young people (1980) stages.

The organizational system of technical creativity of students is very multifaceted. Currently, public education workers of various ministries, trade unions, youth unions, patriotic organizations, etc. are engaged in the creative activities of children and youth. The mass involvement of children and youth in creative activities is carried out by general secondary schools, academic lyceums, vocational colleges, centers and extracurricular educational institutions (creative centers, young technicians' clubs, cultural centers, cultural and technical centers).

The content of technical creativity is selected depending on the age of the students. Grades 1-4 are formed with elementary knowledge, grades 5-9 with basic in-depth technical training. Based on the acquired knowledge and basic skills, the content of students' technical creativity expands. In vocational colleges, students participate in inventive and rationalization activities in their chosen professions. In this, they serve in the implementation of scientific research and design work on the organization of technology, production.

Our century is characterized by the unprecedented development of scientific and technical achievements and the fact that the results of this development enter the lives of ordinary people in a very short time. One of such factors of development is undoubtedly new information technology. Today, no sphere of our life, including the education system, can be imagined without new information technologies (NIIT) and computers, which are its basis.

The introduction of technologies for receiving, processing and creating new information on the basis of computers, that is, a set of computers that perform a certain type of activity and the software implemented in them, is called new information technology. Today, considered the information age, for the first time in history, many areas of human activity are associated not with material goods, but with the processing of information. Therefore, today it is important to teach young people to live and work in the information age, to form the skills of collecting, organizing and analyzing information, and transmitting it. These, in turn, serve as an important basis for the development of many abilities of students, including creative activity, because before proposing any new idea, it is necessary to study the area under consideration in detail, find new information and learn to associate it with the proposed solution. To implement these tasks, of course, it is necessary to process a large amount of information that cannot be stored in the memory of an ordinary person. The possibilities of YAAT make it possible to solve this problem primarily and effectively through automated educational and information systems, knowledge and data banks. In this regard, recently, attention has been increasing in our Republic in this area, over the past 5 years, our country has come close to world indicators in terms of the available computer fleet. However, the lack of development of

the necessary theoretical and practical, scientific and methodological foundations for the use of modern information technologies, including personal computers, in the educational process creates a number of problems, especially related to the development of creative abilities.

When determining the forms and methods of using computers in the implementation of technical creativity, it is necessary to take into account, first of all, the fact that they can satisfy the information needs of students not only for creativity, but also for creating a new technical solution and using them to develop effective ways of its implementation.

The most important task is to develop students' thinking and creative attitude to science, to educate a young generation capable of ensuring that scientific and technical progress reaches world standards in a market economy, to radically improve product quality, and to ensure high production efficiency. By providing modern education to future specialists, it is achieved that they become intellectually capable personnel of the present time.

Today, educators, psychologists, philosophers, and sociologists are also paying attention to the issue of the formation of creative and creative qualities of the individual.

According to educators, if the development of creative abilities in children does not begin at an early age, it will be difficult to do so later. Therefore, it is noted that it is necessary to send children to creative activities from a very early age.

The pedagogical side has also identified ways to develop creative abilities. In general, it is taught that children should be involved in creative activities.

There is no opportunity to acquire ready-made knowledge and skills and apply them in practice. This process is useful for students, but their ability to think does not develop.

We would be mistaken if we said that at school the aspects of the creative abilities of a student's personality can be formed only during educational activities. Perhaps it is not possible to form the creative abilities of students only during academic classes. Practical work is needed directly in a specific type of creative activity, that is, technical, artistic, etc.

Educators consider children's creativity not only as an activity that introduces students to various types of production and technology, develops their abilities, but also as one of the effective methods of educating and educating them to study the world of science.

Psychologists pay great attention to the formation of students' interest in a certain type of creative ability in children's creativity. In other words, when managing students' creative activities, psychologists use the correct diagnostic method of creative abilities, that is, in what type of activity and under what conditions students can show themselves most productively.

Based on the above ideas, by focusing on the development of the creative activity of future teachers, it is considered an urgent issue for our training personnel to direct students to their creative work in educational institutions and improve their abilities to lead them in group classes.

From the first years of independence, great attention began to be paid to education and upbringing. The main goal of the Law "On Education" is to train worthy personnel for the future of our country. Thanks to reforms in the educational process, Uzbekistan has achieved achievements in the field of education in a short period of time that are recognized by leading experts in the world.

The main goal of educating the future generation is to prepare them as professionals who can ultimately benefit society. After all, gaining a place in society is possible only through

acquiring a profession. As our President said in the August 4, 1990 issue of the "Teachers' Newspaper", he said the following in this regard: "In order to get results from personnel, it is necessary to spend money on their training. If we really want to get rid of the shackles of poverty and backwardness, we must seriously engage in training young people and help them acquire modern professions. Greed is not welcome in this area."

The system of vocational guidance of students in our country is implemented through the following regulatory and legal documents:

Vocational guidance of students is organized in accordance with the Law of the Republic of Uzbekistan "On Education", Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 13, 1998 No. 203 "On the Organization of General Secondary Education in the Republic of Uzbekistan" and resolutions and orders of the Ministry of Public Education of the Republic of Uzbekistan in order to guide students of general secondary schools to a profession, provide them with professional advice, information, and assist them in making a conscious choice of a profession based on professional diagnoses.

Vocational guidance of students in the Republic of Uzbekistan is carried out in accordance with the Law "On the Guidance of Students to a Profession and the Requirements for Psychological and Pedagogical Personnel; Creating a basis for providing information about vocational education institutions.

Vocational guidance of students is carried out in accordance with the “Regulations on Vocational Guidance of Students”, approved by Order No. 147 of the Ministry of Public Education of the Republic of Uzbekistan dated October 10, 2001.

Also, the “Regulations on the Vocational Guidance Room” was approved based on this order.

The main tasks of vocational guidance are as follows:

Providing vocational information: providing students with an understanding of the types of modern production, the labor market and professions;

Providing vocational advice: developing the basis for organizing qualified vocational advice based on the interests, inclinations, innate abilities, abilities, skills, family environment, regional conditions, the wishes and desires of students and parents, and the requirements for the profession;

Vocational diagnosis: making a final diagnosis, taking into account the individual psychological and physiological characteristics of a person, age, level of education, skills and qualifications; (diagnostic materials are confidential and are discussed only with the student and his parents) determining the student's professional inclinations, fairly assessing the level of orientation of the person;

Vocational guidance: providing him with recommendations on areas of professional training that correspond to the psychological, psychophysiological and physiological characteristics of the person based on the results of psychological, psychophysiological and medical diagnosis; assisting them in choosing professions that correspond to their interests, abilities and health based on the needs of society and the requirements of the labor market; determining the degree of suitability of the person for a specific profession of his choice based on established regulatory requirements;

Professional adaptation: creating a system of activities that allow a person to become a specialist, form the appropriate social and professional qualities in him, engage in active

creative work, fulfill the given instructions and requirements, and achieve high professional qualifications, and assist in choosing a profession that is suitable for the person from among related professions.

This Regulation clearly defines the participants in vocational guidance work, which are:

Students; parents; educational institution; vocational guide; specialists of the vocational guidance service; teachers; class teacher; school doctor; library director; public organizations; vocational education institutions; enterprises; labor authorities, territorial administration bodies (khokimiyat), local self-government bodies, and the media.

In conclusion, the main task that society has assigned to secondary schools is to educate a well-rounded generation, that is, a person who is mentally mature, spiritually rich, physically strong, and actively involved in some sector of the national economy. The role of technological education in the implementation of these tasks is important, and today there are the following problems for its full implementation:

1. Some educational materials and equipment for preparing students for technological activities are not up to standard.
2. Educational regulatory documents (DTS, curricula and programs) do not meet the requirements of the time.
3. The connection of technological education with production is not established.
4. The indifference of the leadership to science.

The analysis of scientific research work conducted in the field of technology education shows the following modern and promising directions:

- Improving the professional training and creative activity of future technology teachers;
- Preparing students for technical creativity, design, modeling, and construction activities;
- Studying folk crafts based on new technologies;
- Preparing students for professions and entrepreneurship;
- Based on the results of the above scientific research and analytical conclusions, we aimed to direct students to the profession of goldsmithing and entrepreneurial activities using modern technologies in the teaching of one of the promising directions of technology, the module "Folk Crafts Technology".

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