

METHODS OF USE OF CREATIVE THINKING AND MODERN INFORMATION TECHNOLOGIES OF STUDENTS IN EDUCATION

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Abstract: In this article, the role of innovative technologies in the organization of the educational process, as well as increasing the interest in the use of interactive methods and information technologies in the educational process, the possibilities of using information and communication technologies, In my lesson, we discussed the importance of creative thinking and modern information technologies. Proposals for the appropriate use of modern methods and information and communication technologies in the educational process are given.

Keywords: Creativity, creative potential, pedagogical creativity, quality of education, innovation.

INTRODUCTION

Today, the interest in using interactive methods and modern information technologies in the educational process is increasing day by day. One of the reasons for this is that, until now, traditional education taught only the acquisition of ready-made knowledge, and the use of modern technologies allows them to search for their own knowledge, learn independently and think, analyze, even teaches students to draw their own conclusions. Teaching students with modern knowledge, forming independent learning skills, creatively applying acquired knowledge is one of the main issues of modern education in the preparation of future personnel. is considered The essence of the concepts of "creativity" and "pedagogical creativity". Not so long ago, the concept of "creative pedagogy" began to be used in modern pedagogy. However, the need to find innovative and creative approaches to the teaching process ensured the formation of "Creative pedagogy" as an independent subject among pedagogical disciplines. The basis of this subject is the history of pedagogy, general and professional pedagogy, and methodological ideas of such disciplines as psychology, teaching methodology of special subjects, educational technology, and professional ethics.

DISCUSSION AND RESULTS

The general principles of the science of "creative pedagogy" serve to create the necessary conditions for the professional development of specialists, including future specialists. Professional growth and development of a person as a specialist is essentially a process. Professional maturity is an important period of human ontogenesis, starting with professional growth and development ideas (14-17 years old) and ending professional activity (55-60 years old). The formation and development of a creative person depends on the mutual compatibility of changes in his inner and outer world, socio-economic conditions and human ontogeny - from birth to the end of his life, the content of activity that requires continuity and succession. It is known that professional experience is reflected as an integration of knowledge, skills and abilities. However, mastering the skills of professional activity requires not only the integration of practical skills and qualifications, the development of methods and tools for the effective organization of activities as a specialist, but also the awareness of the methodology of professional creativity, the development of creative thinking, and the sufficient mastery of personal qualities of a creative nature. is enough. The formation of a creative person can be defined as the development of a person in terms of creative activities performed in a mutually compatible way and creation of creative products. The pace and scope of this process depends on biological and social factors, the activity and creative qualities of a person, as well as existing conditions, vital and professional events. In modern conditions, it is necessary for a pedagogue to have the qualities of creativity. In recent years, in the educational system of leading foreign countries, special and serious attention has been paid to the issue of formation of creative qualities in students.

Bronson, Merryman (2010), Ken Robinson (2007), Fisher, Frey (2008), Begetto, Kaufman (2013), Ali (2011), Treffinger (2008), and b. many studies conducted by, can be seen from their results. A 2007 book by the one and only Ken Robinson, Is School Stifling Creativity? The video has been viewed 5 million times on YouTube. In addition, teachers are serious about learning the basics of creativity (Begetto, Kaufman, 2013). Literature is being published on the formation and development of teachers' creative approach to pedagogical activity, non-traditional lessons based on videos prepared by the Department of Education are being organized (Ali, 2011; Department of Education, 2013).

Despite significant practical work, most teachers still do not master the experience of how to effectively form creative qualities in themselves and students. Every year, the educational system management authorities focus on achieving high efficiency in educational institutions. For this purpose, a curriculum is developed, a new curriculum is developed. textbooks will be created. This will help both students and teachers to grow professionally. The practical actions will create the need for students to achieve achievements and progress in a certain way, and will help to develop their learning abilities to some extent. However, at the end of the academic year, In educational institutions, there are no high-level positive results in the mastering of subjects by students. Many students have lost interest in learning. As a result, teachers do not think about organizing professional activities with the same enthusiasm as before. Although the governing bodies of the education system are taking new measures to change the activities of students who do not want to learn, and teachers who do not want to teach such students,

the situation remains unchanged. What is the reason for this? Maybe the pre-planned lessons are not interesting for students, maybe the fact that the content of education is set in a certain pattern does not give any stimulus or incentive for students. Abandoning pre-planning of educational activities, formation and development of critical and creative thinking in students, forcing them to think creatively and come up with new ideas will be the main factor in changing the attitude to education and encouraging them to achieve success. The missing factor in training is creativity. To fully understand the general nature of the process of developing creative qualities in a person, it is necessary to first understand the meaning of the concept of "creativity". According to Ken Robinson, "creativity is a set of original ideas with value" (Azzam, 2009). And Gardner explains the concept in his research: "creativity is a practical action performed by a person, which should reflect a certain novelty and have a certain practical value." In terms of Emebayle's (1989) approach, creativity means "the possession of highly unusual skills along with thorough knowledge of a specific domain." The role of innovative technologies in organizing the educational process of higher education is increasing day by day.

The use of remote technologies has expanded the possibilities of modern education. Today, it is possible to get an education from anywhere in the world using modern information and communication technologies (ICT). Although traditional education maintains its position, distance learning technologies are becoming more and more popular.

Today, an educational system aimed at integration into the new world information-educational environment is being established in our country. This is followed by significant changes in the organization of the educational process that meet modern technical capabilities. The introduction of modern information technologies into the field of education makes it possible to qualitatively facilitate and change the methods of education and the forms of organization of the teaching process based on a new approach. Information and communication technologies are the most important part of the process of modernization of the educational system. ICT is information processing methods with various technical and software devices. It is, first of all, computers with the necessary software and telecommunications equipment on which data is placed. Article 1 of the Law of the Republic of Uzbekistan "On Education" adopted on August 29, 1997 defined the legal basis of education, upbringing, and vocational training of citizens and the constitutional right of everyone to receive education. it was emphasized that it is aimed at ensuring the right. The current period shows that there is a high need for new requirements of the educational stage. The use of distance education technologies in the educational process and its management also play an important role in this. In this regard, a number of urgent works are being carried out in our Republic.

Educating young people with modern knowledge, forming independent learning skills, creatively applying acquired knowledge is one of the main issues of modern education. Experienced pedagogues attach great importance to the creation of pedagogical technologies or teaching technologies, instead of continuing to search for ways to reform the teaching process. The term "Pedagogical technology" appeared in foreign countries in the early 60s of the last century, and until now "Pedagogical technology" is mentioned in

several foreign countries, in the prestigious magazines of the USA, Japan and England, and the UNESCO international organization of education. is published in the series "Pedagogical technology" in the bulletin of the International Bureau of Education.

Since 2013, a unified videoconferencing educational technology has been implemented among all higher education institutions (HEI) of the Republic of Uzbekistan, and now a lot of attention is being paid to electronic education in this regard. Planned work is being carried out to open up new opportunities and prospects for HEIs. For example, remote management of personnel qualifications in regions is an example of this. The new stage of electronic or distance education envisages not only the use of information technologies, but also the provision of educational resources in electronic form.

Distance learning technologies - Distance learning is a broader concept than E-Learning, which is a synthesis of interactive self-directed learning and intensive counseling. Thus, electronic education is a part of distance education. Distance education provides the delivery of the main educational material to students and interactive work between the student and the teacher during the learning process. In this case, the delivery of manuals can be carried out even without a computer and the Internet.

Advantages of Distance Education: There are many positive aspects of distance learning. The opportunity to study from the place of residence - people living in remote villages do not always have the opportunity to go to the big cities and study at the university. Distance education technologies allow them to study without leaving their hometown.

Combining study and work - students have the opportunity to study without being separated from work, which is especially useful for those who are pursuing advanced training or a second higher education. Acquisition of high-quality technologies and educational content - the student can be trained with the help of high-quality educational materials, communicate with the teacher and create his own individual study plan.

Impartiality of evaluation - distance education technologies provide for the permanent control of the quality of knowledge, evaluation of results, impartial automated evaluation free of human factor, loss of material interest in places. An individual approach to education - a flexible schedule, combining work and study, as well as adapting the mastered material to the speed of individual assimilation of information makes distance education convenient for everyone.

Modern humanitarian academy is one of the leaders in distance education. It is an innovative HEI, e-learning that enables students in different parts of the world to get quality e-learning at low cost without changing their lifestyle. The use of information and communication technologies in the educational process is the need of the hour. Without the use of modern methods of teaching and information and communication technologies, a teacher cannot achieve effective results in his professional activity. However, it is important to choose the right purpose and content, methods and means, and organizational forms of education.

With the increase in the flow of information and the complexity of educational methods, it is increasingly difficult to organize education in a traditional way. Information and communication technology tools are of particular importance in the educational process and provide extremely wide opportunities for the field of education: organization of differential and individual teaching process; feedback: students' self-monitoring and correction; use of computer and information technologies such as animation, graphics, multiplication, sound in lessons; to create skills for students to learn science, etc. Practice is the basis of knowledge. And information technology has its advantage in this respect. The presence of the opportunity to explain the learned theoretical knowledge in a practical way on the basis of technical means ensures more active participation of students in the educational process. Receiving and assimilating information, effective organization of two-way communication (between teacher and student, student and student) requires high student activity.

Information and communication technologies, in turn, are one of the most important factors that create motives. Because the summation of information, presentation, i.e., the availability of various presentation options, the use of animations, the provision of information suitable for the age and physiological characteristics of the learners, increase students' interest in education and the desire to learn. creates internal driving forces (motives). The content of the work carried out in this regard is to teach how to develop a motive and how to keep it. Acting on the basis of effective use of information provides the best ways to solve the following tasks: processing of information about the source and the process taking place in it; to regularly receive periodic information about the progress of processes and conduct controls based on them.

The research method using information and communication technologies of education provides for the independent creative activity of students in the process of conducting scientific and technical research within the framework of certain topics. When using this method, learning is the result of active research, discovery and play. In our opinion, the following can be cited as the main tasks in the implementation of information technologies in continuous educational processes:

- creation of the necessary material and technical base for the implementation of new information technologies in the educational process;
- design and use of modern information technologies for the educational process;
- formation of knowledge and skills of users in the field of modern information and communication technologies;
- guarantee efficiency in education and training processes based on modern technologies.

In the educational process, it is necessary to pay attention to the following stages in the use of information and communication technologies: the stage of presenting and explaining educational materials to students, the stage of mastering educational materials in the process of interaction with the computer; The stage of repeating and strengthening acquired knowledge, skills and competencies; The stage of control by self-examination of the achieved achievements and results; Control stage; The phase of

correcting and making corrections to the distribution, classification, and systematization of educational materials according to the results and conclusions of the self-monitoring stages.

As technology improves, the teacher's role becomes one of managing the learning process. But this situation does not reduce the role of the teacher in education and does not push him aside. The use of information and communication technologies in the educational process fundamentally changes the role of the teacher. In traditional education, the task of the teacher is to provide information (explaining, repeating, reinforcing, etc.), when information and communication technologies are used, these tasks are performed by the computer (learning material is stored in the computer memory or on SD disks). In addition, the main task of the teacher is to manage the cognitive activity of the student, to plan and control the educational process.

The development of current science and technology, on the one hand, increases information and data, on the other hand, it leads to the loss of a stable interest in knowledge among students, because determination, creative search, willful effort are replaced by indifference, inactivity. In other words, they become "slaves of ready-made information". Because computers, displays, EHM, calculators ease the mental work of people, free them from mental effort.

In this, the role of the teacher, who is considered the organizer and manager of the educational process, is important. Because the correct organization of the process does not cause the above shortcomings, but creates opportunities to find the positive aspects of these opportunities and use them effectively. The teacher should not forget that the group of students is made up of people and should not ignore the individuality of each student. The loss of psychological contact with students, even for a short period of time, causes serious consequences. The correct organization of the process depends on determining and ensuring the fulfillment of the pedagogue's tasks. Electronic means of education. The teaching process consists of the interaction of the pedagogue, learner and teaching tools. The possibilities of modern computer tools and information technologies allow teaching tools to be assigned part of the tasks of the teacher and the learner. Rich in information, resources, and training programs. What is the role of the teacher in such a learning environment?

First, instead of the teacher's task of imparting knowledge in traditional education, the task of managing the educational process, advising the student at all stages of the educational programs, and controlling the quality of his knowledge arises.

Secondly, the duty of upbringing. Education is a complex and multifaceted process that develops professional and personal qualities. "Live" communication in the process of personal education is the basis of existence of human society. Teaching the lesson on the basis of information and communication technologies makes the work of teachers and students much easier.

The achievements made by information technology in improving the self-management and educational processes of the human person are very important. Especially in the 20th century, which is the age of

information, and the value of each individual piece of information is predicted to increase. For example, the place and role of modern technologies is very important in improving the process of simple communication, increasing the effectiveness and efficiency of interpersonal relations.

CONCLUSION

Thus, creative thinking in education and the use of modern information technologies in the lesson conducted with the help of computer tools differ from the traditional lesson in the organization of the educational process and the methods used in it. The learning process is based on the student's independent learning. This principle determines the attitude of subjects participating in the teaching process and the teacher's role in the process. Therefore, interest in information technology, computer-based classes, self-management, and the desire to learn new knowledge are preserved until the end of the lesson. remains. In the technology of creative education, it is necessary to use various methods to increase the effectiveness of the creative education process. For example: "Perception map", "Rose", "T-schema", "Staircase", "FSMU", "Brainstorming". Technologies and methods such as "Essay", writing "statement, essay", "Blitz survey". In such lessons, the student's motivation to learn increases.

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