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TÍTULO: La tecnología de la información en la educación moderna.

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RESUMEN: Se observa, que hoy en día, la tecnología de la información es el factor más importante que influye en la calidad del sistema educativo. La principal prerrogativa es la calidad y el nivel de capacitación de los estudiantes en una institución de educación superior que es la clave para el funcionamiento exitoso del sistema educativo. El artículo está dedicado al uso de la tecnología de la información en el proceso educativo. Los autores revelan las posibilidades y áreas para el uso de la tecnología de la información en la educación moderna. Se presta especial atención a los beneficios de utilizar la tecnología de la información y la comunicación en comparación con los métodos de enseñanza tradicionales.

PALABRAS CLAVES: tecnología de la información, individualización, proceso educativo, calidad de la educación, pedagogía actual.

TITLE: Information technology in modern education.

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ABSTRACT: It is noted that today information technology is the most important factor that influences the quality of the education system. The main prerogative is the quality and level of training of students in an institution of higher education that is the key to the successful operation of the education system. The article is devoted to the use of information technology in the educational process. The authors reveal the possibilities and areas for the use of information technology in modern education. Special attention is paid to the benefits of using information and communication technology in comparison with traditional teaching methods.

KEY WORDS: information technology, individualization, educational process, quality of education, actual pedagogy.

INTRODUCTION.

Professional mobility of a graduate of an educational institution should be ensured by high-quality results of educational activities. Qualitative changes that occur in education should meet the requirements of the labor market needing competitive specialists with a high-level professional qualification, a sufficient level of competence, and able to adapt quickly to the constantly changing

environment of a workflow (Abykanova, Tashkeyeva, Idrissov, Bilyalova, & Sadirbekova, 2016; Imashev, Abykanova, Rakhmetova, Ilyasova, Shahimova et al., 2016; Tashkeyeva, Abykanova, & Idrissov, 2014). One of the possible development orientations of professional education at present is the use of modern information technology in training and education. Let us consider in more detail the possibilities and areas for the use of information technology in modern education. They are as follows.

1) Creation and development of information space. Information technology makes it easy to access information at any time. Students and teachers use information technology to acquire educational material on the Internet. Information technology accelerates the transfer and dissemination of information. IT specialists create educational applications that can be used by students; now students can use the electronic library for mobile phones and thus save their time, read anytime and anywhere.

2) Use of multimedia and interactive whiteboard. The use of multimedia tools is important for increasing the level of mastering new material. The advantages of using multimedia tools are manifested in the following: it enables adapting to students' peculiarities, changing the presentation of material, reducing the unproductive work time of a teacher, increasing the motivation of learning; it provide visibility, which contributes to the integrated perception and better memorization of the material.

3) Distance learning. Information technologies make it possible to study the necessary disciplines and professional modules via online courses. Students receives all educational materials and tasks via e-mail or on the website of an educational institution. Distance learning got especially popular among those who wish to obtain a second higher or additional professional education.

4) Use of digital educational resources. Digital educational resources are the most important component of a modern teacher's activity. The main advantages of using digital educational

resources include the full use of new pedagogical tools, the creation of an individual educational trajectory of a student, the possibility of building one's own training course, stimulating students' learning motivation, improving quality and addressing gaps in knowledge.

5) Use of computer simulators and virtual laboratory works. When using computer simulators or performing virtual laboratory work, it is possible to simulate a labor situation or a technological process in the classroom with the help of modern technical support. Students, under the guidance of a teacher, apply their knowledge, display their creative abilities, analyze the situation being modeled, and make decisions in a particular labor situation.

6) Use of computer technology when checking knowledge. The computer surveillance system enables implementing a more effective technology for checking students' knowledge. The use of a computer to check students' knowledge enables a teacher to reduce the time for verifying test results. This also enables conducting knowledge check more often and significantly reducing the subjectivity factor that students often complain about.

Therefore, the implementation of new information technologies in the educational process significantly changes the traditional education system, introduces completely new components of the content of education necessary for training competitive specialists. The use of modern information technology is a prerequisite for the development of more efficient approaches to learning and teaching methods.

DEVELOPMENT.

Information technologies today are the basis and one of the most important factors that have a strong influence on the quality of the education system in the world. A lot of attention has been paid to the problem of information technology in the field of education, and this subject matter is well covered in the works of such scientists as Y.K. Babansky, Y.S. Branovsky, Y.L. Vagramenko, A.G. Gein, A.P. Yershov, I.V. Robert and many others. Research in the field of higher education related

to the study of informatization can be traced to the works of such scientists as I.I. Pashkova, S.Z. Kozlova, M.Y. Zhilina, and V.G. Domrachev.

In today's realities, when the requirements for the quality of graduates' training are increasing and global informatization is taking place, the development of the latest information technologies is going by improving future specialists' training.

For the modern educational system, training is, first of all, cognitive activity and is focused not only on obtaining knowledge and skills. A change also takes place in the student's personality: first of all, the intellect rises, and the main focus is on self-development. Institutions of higher education are built in such a way that students first learn, and then they experience a stage oriented at managing other people and organizations.

Professional competence, scientific qualifications, and training lead to the formation of a new type of specialist who enthusiastically finds a creative approach to solving problems (Abykanova, Bilyalova, Makhatova, Idrissoy, & Nugumanova, 2016; Imashev, Barsay, Abykanova, Bekova, Shimakova et al., 2014).

The main focus is the quality and level of training of students in higher education institution to determine the effectiveness of the operation of the entire education system.

It is necessary to develop new approaches to training teachers capable of solving the problems of education creatively and independently. Such approaches have the following objectives:

1. Formation of students' ideas about the creative nature of pedagogical activity and that it plays a huge role in the life of society.
2. The emergence of professional culture of future teachers.
3. Orientation towards personal and professional development, and independent self-development taking into account individual features.

The use of information technology in the educational process will ensure that the quality of future specialists' training will improve.

The information technology should imply a set of tools and methods for collecting, processing and transmitting data to obtain new quality information about the state of an object, process or phenomenon.

Information technology in education has advantages, among which are:

- Creation of the most effective education information management system.
- Formation of students' cognitive activity during the learning process.
- Individualization of the educational process and the process of cognition with the help of information technology.

Today, the relevance of using information technology in the educational process at higher educational institutions is primarily due to the social need to improve the quality of education and the practical need to use modern computer programs in higher educational institutions.

Modernization of the educational process, first of all, requires a transition from lecture methods of mastering educational material to active group and individual forms of work, organization of the independent search activity of students that will enable training specialists with a pronounced personality and organizing students' activities engaged in various environments. This can be facilitated by the implementation of information, computer technologies and digital educational resources into the educational process.

Good knowledge of information and communication technologies by higher education teachers is the basis for improving the quality of education. The use of information technology to create educational and methodological support enables increasing the efficiency of the educational process. A competent use of information technology by teachers enables increasing their impact on the formation of a student's creative potential.

The information component of the educational process determines the content aspect of training a specialist at a university. Such an information component can be an electronic educational and methodological complex, i.e. a didactic system with the interaction between a teacher and students, with applied educational software products, didactic tools, and teaching materials that support the educational process.

Information technology in education solves a number of important tasks, among which there are

1. The study of phenomena and processes that occur within complex organized systems and based on the use of computer graphics and computer simulation.
2. The study of various physical, chemical, biological and social processes that can occur with high or low speed.

The concept of information technology includes both computer and telecommunication technologies in education (Gorbunova & Subbotina, 2013; Abykanova, Idrissov, Saltanova, Shazhdekeyeva, & Syrbayeva, 2017). The authors of the article consider information technologies as a set of modern technical means that enable the collection, storage, processing and transmission of information with the help of modern computer appliances. Other points of view concerning the concept of information technology are also considered in this article. M.I. Zhaldak considers information technology as a set of methods and tools that enables enhancing people's knowledge and providing many opportunities for managing technical and social processes (Zhaldak, 1997).

From the point of view of V.A. Izvozhikov (2007), information technology is the technology and methods of the educational process that use new electronic learning tools including computers.

Researcher Y.N. Mashbits (1998) believed that information technology is a combination of various training programs including knowledge check and training systems based on artificial intelligence.

The main task of information technology in the field of education is the development of an

interactive environment for managing the process of educational activities and access to modern information and educational resources (Samsikova, 2013; Kotova, 2014; Enbom, 2014).

The structure of information technology includes multimedia textbooks, various kinds of educational websites based on hypertext and many other sources. Information technology in the educational process have a significant impact on the formation of a modern information world picture (Abykanova, Nugumanova, Yelezhanova, Kabylkamit, & Sabirova, 2016; Tashkeyeva, Abykanova, Sariyeva, Sadirbekova, & Marhabaeva, 2016). The relevance of the use of information technology in the educational process is caused by the social need to improve the quality of education, as well as the practical need to use modern computer programs (Imashev, Kenzegulov, Sardarova, Nigumanova, Abykanova, et al., 2016). The main purpose of the application of information technology in the educational process is, above all, enhancing the intellectual abilities of students in the information society, as well as individualization and improving the quality of education at all levels of the educational system.

Information technology in education contributes to:

1. Student's knowledge building.
2. Training higher education graduates for life in an information society.
3. The implementation of social demand that focuses on global information processes (Pugachev, 2012).

New information technology contributes to improving the efficiency of learning, its individualization and differentiation, the organization of new forms of interaction in the learning process and the process of changes in the content and nature of the activities of learners. The task of teachers is to apply new technological means in the educational system and to achieve successful operation of education in the modern world.

To date, there are several areas of use of modern information technology in the field of education:

1. Use of information technology as a learning tool that improves the teaching process and improves its quality and efficiency.
2. Use of information technology as a tool for learning, self-knowledge and world knowledge.
3. Use of information technology as a means of learner's creative development.
4. Use of information technology as the main means of automating the processes of monitoring, correction, testing and psychodiagnostics.
5. Organization of communications based on the use of information technology to transfer and acquire teaching experience, methodological and educational literature.
6. Intensification and improvement of the management of an educational institution and the educational process through the use of modern information technology system.

According to their educational and methodological functions, educational resources are divided into:

- 1) Tutors and simulators designed for a trained student who is familiar with the course of the relevant academic subject and study topic. These are complexes containing brief educational material of reference type and test material (tasks and tests) with answers.
- 2) Textbooks designed for students who want to make acquaintance with the course of the relevant academic subject and study topic or to raise their initial levels. These are complexes containing educational material lined up in a methodically focused sequence.
- 3) Interactive tutorials that not only contain educational material responsive to user actions and making it possible to check the quality of learning, "prompting" the correct algorithm if necessary, correcting mistakes, etc.
- 4) Directories and encyclopedias with more or less developed hyperlinks making it possible to quickly make contextual inquiries or go to the desired section of the complex. The complex includes compact discs with not one file or one program but with many of them. Indeed, a computer

program is usually meant as some kind of tool that enables performing some kind of action (for example, a text editor Word or a computer game). However, educational publications may consist only of hypertext documents processed by Internet Explorer (or any other browser installed on a computer), and visual material. Such publications are no longer a program. However, not all authors make such a distinction so clearly. Therefore, the following terms can be found in the literature: electronic learning complex, electronic learning publication, learning program, electronic textbook, teaching program, and electronic publication. The term “electronic publication” is also used in the sense of “republication of a printed version in electronic form”. There are electronic versions of printed books equipped with a good hypertext system.

Special types of electronic publications include such learning complexes as libraries of visual aids (photos, drawings, animations, audio and video files) and virtual simulators (virtual laboratories). Libraries of visual aids are useful for teachers when preparing lessons, i.e. borrowing aids to create own teaching materials.

Simulators (laboratories) enable teachers to present a phenomenon visually in real life with a change in the parameters of this phenomenon; for example, when studying the movement of a stone thrown at an angle to the horizon, a teacher can demonstrate a change in the body’s movement trajectory by varying the initial speed, the angle of throw direction, the height of the structure from which the stone was thrown, and even the acceleration of free fall (that is, the influence of the Terrestrial, Lunar or Martian gravity). Such simulators or virtual laboratories can greatly save time spent on explaining the topic and thereby increase the efficiency of using the time of the lesson.

A recent trend is the higher education use of information technologies that rely on web technologies and the global Internet (Dudina & Yarygin, 2014; Repinetskaya, 2014). Scientists regard the Internet as an environment that does not provide knowledge “in finished form” but provides great opportunities for those who are able to actively search for information, analyze and think

independently. Nowadays, the term “virtual space” is widely used in mass media, which is understood as the totality of not only educational resources of the Internet, but also a completely new “infosphere,” the dimension of which includes:

- Technological and innovative Internet tools;
- Human resources involved in education and the processes of informatization of education;
- Relations between specialists working in education in view of the means of new information technology and the Internet.

Today, distance learning is especially popular (Semenova & Slepukhin, 2013). Distance learning is the interaction of training information flows organizing the learning process through a remote computer (server). The main impetus to the development of distance learning was laid down at the end of the 20th century, and today distance learning is the most promising and effective system for training specialists that has a huge potential in the 21st century.

Distance learning is a complex of educational services provided to the general population with the help of a specialized informational and educational environment focused on information exchange tools operating at any distance. In different higher education systems, distance learning is, first of all, a set of technologies, methods and means, providing the opportunity to study without visiting an educational institution but, as a rule, with various consultations with teachers of an educational institution or with persons certified by an educational institution.

The main activities of distance learning are oriented towards the quality of education, the training of high-quality specialists and the development of a single educational space where the emphasis is on increasing the social and professional mobility of the population and self-awareness (Fufayev, D. E. & Fufayev, E. V., 2010; Moiseyeva, 2013; Bordovskoy, 2011).

To date, a strategy has been developed for the development of the information technology industry in different countries to form a unified systemic approach of the state to the development of

information technologies in the field of education. The strategy defines the main goals and areas of development of the information technology industry and the mechanisms for achieving the goal. The world information technology market is about 5 trillion US dollars (Enterprise management, 2019); for example, in Kazakhstan, for the period 2015-2025, the main state policy in the field of education is the professional development of teachers of educational organizations and compliance with defined norms and standards.

The goal pursued by Kazakhstan is the modernization of the higher education system. This is, first of all, the implementation of information technology into the education system aimed at maximizing the educational needs of students across the widest range of specialties, levels of education, educational institutions, informational, and educational resources. Today, institutions of higher education are oriented towards the use of information technology in the educational process that contributes to the effectiveness and quality of education. Knowledge of information technology is the key to success in employment, as most companies consider this aspect as the main one.

The main goal of distance learning is, above all, the creation of a single educational space via the implementation of information technologies into the educational process. Internet network technologies enable making the training schedule more flexible and to attract the necessary contingent of students.

The electronic textbook can be attributed to information technology in the field of education. It can be understood as theoretical and scientific practical material, tasks, training, monitoring and evaluation of the quality of learning formed with the use of special programs that enable presenting information in the form of text, graphical images as well as multimedia videos and sound effects (Semenova, 2010).

The electronic textbook helps the teacher in solving didactic, methodical and psychological tasks, as it is the most flexible teaching tool that makes it possible to modify educational material as often as

necessary. When using electronic textbook, students, along with lectures and practical exercises under the guidance of a teacher, are independently engage in the study of new disciplines with the presented electronic material as a full-fledged teaching tool, as well with as an assistant-consultant and examiner (Shchurova, 2011).

Information technology provides the following opportunities:

- Rational organization of the cognitive activity of students during the educational process.
- To make learning more effective by involving all kinds of student perception in a multimedia context and arming the intellect with new conceptual tools.
- To build an open education system that provides each individual with their own learning path.
- To involve children with different abilities and learning styles in the process of active learning.
- To use the specific properties of the computer to individualize the learning process and appeal to fundamentally new cognitive tools.
- To intensify all levels of the educational process (Maksimovskaya, 2003).

The main educational value of information technologies is that they allow creating an immeasurably brighter multi-touch interactive learning environment with almost unlimited potential opportunities that are available to both teachers and students. In contrast to conventional technical means of education, information technologies allow not only to saturate students with a large amount of knowledge, but also to develop their intellectual and creative abilities, their ability to independently acquire new knowledge, and work with various sources of information.

Scientific and technological progress caused the technical re-equipment of the national economies and led to the rapid turnover of machinery and technology used in various fields is characteristic for the present time.

The change of the foundations of modern production in the course of scientific and technological progress, the use of new machines and technologies lead to an increase in the share of intellectual

work, the creative function of workers, their professional mobility, and naturally, cause the transformation of the system of knowledge and skills that students should receive at school. At the present stage of development of the educational process, among the top priorities are the tasks to improve the quality of education, and learning motivation, as well as to overcome accumulated destructive phenomena. It is possible to combine traditional means with the latest achievements of science and technology.

In the context of modernization of education, more and more followers are finding the idea of strengthening students' independent creative thinking, their personal orientation, strengthening the activity component in education. An important role in ensuring the effectiveness of the educational process is played by its activation based on the use of new educational technologies including information technologies. The need to search for new pedagogical technologies is due to the following contradictions: between motivation and stimulation of the students' teaching; passive-contemplative and active-transformative types of educational activities; psychological comfort and discomfort; education and training; standard of training and individual development; subject-subject and subject-object relations.

The functions of a computer as a tool for learning activities are based on its ability to record facts accurately, to store and transfer a large amount of information, as well as to group and process statistical data. This enables optimizing the management of learning, improving the effectiveness and objectivity of the educational process with significant savings in teacher times in the following areas:

- Getting informational support.
- Diagnostics, registration and systematization of training parameters.
- Work with educational materials (search, analysis, selection, design, creation).
- Organization of teamwork.

- Implementation of distance learning.

When working with educational materials, the PC provides a teacher with various types of assistance, which is not only to simplify the search for the necessary information when creating new educational materials through the use of reference information systems, but also to design the materials for training (texts, drawings, graphs), as well as in the analysis of the existing developments.

Automatic analysis, selection and prediction of the effectiveness of educational materials are important areas of using a computer as a tool for information support for the activities of a trainer. The teacher can also select materials for learning (make lexical and grammatical minima, select texts and exercises), but also analyze texts and whole tutorials (Mashbits, 2006). In addition to the development of printed educational materials, modern computer tools allow teachers, without being engaged in programming, to create new computer-based learning programs independently. There are several possibilities for this: modification and addition of open computer-based learning programs' databases with the use of so-called authoring or generative programs. These programs are called generative since they generate computer-based learning program from the language material introduced by a teacher.

With regards to a student, a computer can perform numerous functions by playing the role of Teacher, Expert, Activity partner, and Activity tool. Students can use PCs according to their individual needs at various stages of work and in various qualities. Due to the possibilities of implementing the functions of the teacher, the computer is often used in the process of independent work and homework of students, in the course of autonomous language learning, in order to fill the gaps in knowledge of slow learners. In this situation, training computer programs specially created for educational purposes are used.

It can be said that the computer is not a “teacher” but turns into an active teacher’s assistant. Along with the informative content, the interactive lecture is emotional due to the use of computer slides in the process of its presentation. In advance of preparing a lecture, the teacher develops the required number of slides on the computer in the Power Point application and complement the video information contained on slides with sound and animation elements. Naturally, this greatly increases the requirements for teacher qualifications. Teachers must have the necessary level of knowledge of computer technology and possess the skills to work with software.

An important condition for conducting an interactive lecture is also the presence of a specialized audience equipped with computer appliances and modern means of public demonstration of visual and sound educational material. During the presentation of the lecture, the teacher occasionally presents the information contained on the slide as an illustration. This contributes to a better learning of students. The effectiveness of the use of interactive lectures when teaching the course of economic theory in institutions of higher technological education is due to the peculiar design of textual information in the form of graphs, schematic diagrams, tables, and formulas widely used by teachers of technical disciplines (Novikova, 2014; Golitsina et al., 2008; Tomina, 2014). This, in combination with sound effects, animation elements and teacher's comment, makes the training material presented in the lectures on humanities discipline more accessible to students with a technological mindset. Thus, a simultaneous participation of a teacher and a computer in the learning process significantly improves the quality of education.

The use of the proposed methodology activates the teaching process, increases the interest of students in the studied discipline and the effectiveness of the educational process, as well as allows to achieve a greater depth of understanding of the educational material. On the one hand, the cooperation between the teacher and the computer makes the academic discipline more accessible for understanding by various categories of students, improves the quality of its mastering. On the

other hand, it imposes higher requirements on the level of teacher training and his qualifications since teachers should not only master traditional teaching methods, but also be able to modernize them in accordance with the specifics of students by using modern advances in science and technology.

Along with the benefits, the implementation of information technology may have negative sides. There is a number of problems arising in the process of applying information technologies; for example, there is a ratio of information volumes: the information provided by a computer can significantly differ from the volumes that a user (student) is able to mentally embrace, comprehend and assimilate. The individualization of the learning process is possible. The essence of this problem is that each person learns the material in accordance with their individual abilities of perception, which means that as a result of such training, after 1-3 classes, students will be at different levels of study of the material. This may lead to the fact that the teacher will not be able to continue teaching according to the traditional system since the main task of this kind of training is to ensure that students are at the same level of knowledge before learning new material and that all the time allotted for working with it was busy.

The difference in the "machine" and human thinking is that if the machine "thinks" only in the binary system, then the thinking of man is much multifaceted, wider and richer. How to use a computer to develop students' approach to thinking, and not to inculcate a certain rigid algorithm of mental activity in it. Here the main task is that a student does not become an automaton that can think and work only according to the algorithm proposed by the programmer. This can be achieved by combining information-based training methods along with traditional ones.

Programs should provide the user with the possibility to build his/her own algorithm of actions, and not impose ready-made one created by someone. The psychological burden that a user experiences is as follows: highly qualified experts develop programs. It may be such a situation that when

receiving prompts, which in this case are compiled at a high scientific level, the user may have an opinion that his/her level of training is very low and, accordingly, there will be a decrease in self-esteem and everything accompanying it.

To achieve positive results of computer, use in training, it is not enough just to implement them into the learning process, it is advisable to develop new subject programs that would include the use of computer technology throughout the entire learning process. The program, in turn, will determine the methods of teaching and the conditions for the implementation of the educational process. Moreover, most significantly, when specifying the composition of acquired knowledge and their connections, the program thereby designs the scientific style of thinking that needs to be formed among the trainees when mastering the educational material offered to them during the use of information technology.

Along with the above problems of the computerization of education, there are other equally important ones. These include information culture of teachers, teachers' readiness to use information technology in training, technical equipment of universities and schools, etc. Thus, it is already obvious that the pace of development of computer technology is clearly ahead of the research and consideration of the problems associated with its operation (Polat, Bukharkina, Moiseyeva, & Petrov, 2000). The ability of a computer to act as a teacher in the educational process is evaluated differently: from their absolute negation to the statement that all the main and auxiliary functions of the teacher can be transferred to a computer. Most experts are of the opinion that a computer, performing a number of tutoring functions cannot completely replace a teacher for a number of reasons. The main reasons are the following:

- On a computer, those aspects of the teacher's activities that are related to his/her educational functions cannot be fully imitated.
- The purpose of training is also the development of a person's communicative ability.

- A computer cannot replace human communication and understand the mystery of human thought.

At the present stage, the most constructive approach is that the computer should not be opposed to the teacher, but it is advisable to consider it as a means of supporting the professional activity of the teacher.

The advantages of using modern information technologies in the educational process are obvious. They contribute to the improvement of practical skills, enable organizing the learning process effectively, increase student interest in the subject, and intensify cognitive activity of students.

There are undoubted advantages of multimedia technologies as a means of learning in the possibility of combining logical and figurative ways of learning information: enhancing the educational process by increasing visibility. The methodical purpose of multimedia is that it is easier to interest and train a student when he/she perceives a coordinated stream of sound and visual images, and experiences not only informational but also emotional impact.

However, some negative points can be noted:

- Reducing the direct influence of teacher's personality.
- The educational process is not only learning but also the formation of a personality and a computer, unfortunately, does not provide this.
- Computers are harmful to health, so when planning a lesson, it is necessary to comply with sanitary and hygienic requirements.

A computer will never be a teacher of students; only a teacher can do this. Teacher's words are still very important. With the help of the word teacher educates and manages the cognitive activity of students. A computer can help improve the relationship between the teacher and the student and bring them to a higher level.

Currently, in order to meet the needs of students in obtaining knowledge, teachers must master educational information technologies. In addition, given technological development, teachers must constantly improve their information culture through self-education without abusing the use of these technologies in their practice. Teachers must be creative. The means and forms of media education give teachers opportunities for professional growth and self-improvement on the path of using the latest scientific and information technology achievements. The latter contributes to the updating of the content and forms of modern education.

CONCLUSIONS.

The modern educational technological equipment contributes to the modernization of the educational process, activates the mental activity of students, contributes to the development of creativity of teachers, allows for distance education, and develops a system of continuing education. It thereby increases the efficiency of the educational process.

In different publications, the computerization of the educational process is considered as one of the actual factors of the training organization within academic subjects (Izvozchikov, 2007; Samsikova, 2013). The newest information technologies in training allow using more actively the scientific and educational potential of leading universities and institutes. They attract the best teachers to creating distance-learning courses and expand the audience of students. Despite the fact that a wealth of experience in the field of computer learning has already been gained, many teachers are wary of the possibility of using computer-based learning tools (Bogdanova, 2013; Sergushina & Yevseyeva, 2014).

It should be noted that the process of computerization of education is faced with a number of problems. The process of implementing information technology in training is quite complex and requires deep reflection. On the one hand, it plays an important role in ensuring the effectiveness of the educational process, on the other hand, there may be a problem with the pace of students'

mastering the material using a computer, that is, the problem of possible individualization of learning.

In conclusion, it is worth noting that in today's realities, the implementation of information technologies in the educational process has positive and negative points. The positive aspects of information technology include facilitating the student's learning process, enhancing the intellectual abilities of students and, undoubtedly, improving the quality of education at all levels of the educational system. Negative moments include the problem of the ratio of information, i.e. there is a large amount of information in a computer that a student cannot fully understand (as opposed to a computer).

According to most experts, the computer cannot completely replace human communication and understand the mystery of human thought. At the present stage, a constructive approach is that the computer should not be opposed to the teacher; it is more expedient to consider it as a means of supporting the professional activity of a teacher. Information technologies in the educational process contribute to the fact that there is a clear demonstration of information, significant savings in time and money, heightened student interest and the design of research results that allow analyzing the influence of various factors on the process being studied.

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