

Possibilities of Application of digital technologies in educational training in the conditions of the pandemic

إمكانيات تطبيق التكنولوجيات الرقمية في التدريب التعليمي خلال ظروف الوباء

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Abstract:

The relevance of the chosen research topic is due to the fact that the life of citizens involves the interaction of both the real world and the virtual world. The aim of the study is to conduct a comprehensive study of digital forms of school-family cooperation in a pandemic and how these digital forms are used in continuing social relations and organizing the educational process from a distance.

Key words: ICT; technology; distance learning; communication.

الملخص:

ترجع أهمية الموضوع المختار إلى حقيقة أن حياة المواطنين تنطوي على التفاعل القائم على العالم الحقيقي والعالم الافتراضي. إن الهدف من الدراسة هو تسليط الضوء على الأشكال الرقمية المتوفرة للتعاون بين المدرسة والأسرة في حالة حدوث جائحة، وكيف يتم استخدام هذه الأشكال الرقمية في مواصلة العلاقات الاجتماعية وتنظيم العملية التعليمية عن بعد. وما حدث في سنة 2020 بعد انتشار جائحة "كورونا" عبر العالم، حيث انتقلت العملية التعليمية انتقلت إلى نظام التعليم عن بعد

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أو الـ "أون لاين" كما يسمّى، وبالتالي توجّب عليهم الاستعانة بأدوات تكنولوجيا جديدة لتسهيل التواصل والاتصال بين المعلمين والتلاميذ والأولياء.
الكلمات المفتاحية: ICT، التكنولوجيا، التعليم عن بعد، الاتصال.

Introduction:

The need for teachers and parents in operational communication is objective. However, in most cases, it is teachers who are not ready to communicate and interact with parents online, both technically and psychologically. Fundamentally new forms of mediated communication between teachers and parents are emerging, for example, electronic resources, social resources, educational resources, information and communication resources and technologies. For this reason, a detailed analysis of the most optimal forms of interaction is highly relevant. An analysis of the degree of development of this topic allows us to conclude that this topic has been developed in detail by modern researchers.

Object of study. The object of the research is the digital forms of cooperation between schools and families in a pandemic, as well as the methodology for using them in organizing the educational process.

Subject of study. The subject of the research is the social relations that are formed through the use of digital forms of cooperation between schools and families in a pandemic.

The first topic: The field of information technology.

At present, it is not enough for life and work to have certain academic knowledge, critical thinking, it is necessary to have specific technical skills. For this reason, children from an early age tend to join the field of information technology. It is the sphere of information technology that is the most promising sphere of activity of a citizen.⁽¹⁾

(1) Abissova M.A, Fokin R.R: Information technology teaching services as a methodological factor in the development of promising teaching =

In this regard, with the modern period of development of public relations, computer courses, as well as various educational information systems, have become very popular among schoolchildren. Most of the schools and other educational institutions are equipped with modern computer technology, which is used by teachers not only in teaching computer science, but also in other disciplines.

It is worth focusing on the fact that each student is individual, that is, he masters new material in different ways. Teachers are required to use an individual approach to each student. Significant assistance in this activity is provided by modern information technologies, the Internet, and multimedia facilities. Under the concept of "means of new information technologies" it is necessary to understand specific software and hardware means, as well as devices, including modern means and systems of information exchange, which are aimed at implementing operations for the collection, production, accumulation, storage, processing and transmission of the necessary information.

Achievements of scientific and technological progress determine the introduction of automated systems, software, robots and processing centers into industrial production and training. This posed an important task for educational institutions - to adjust the educational process so that schoolchildren have the opportunity to actively participate in a fundamentally new stage in the development of modern society, which is inextricably linked with informatization. Fulfillment of the social order of society required additional technical equipment of educational institutions with special equipment and necessary equipment. For schoolchildren, the process of informatization was expressed in an ever-increasing flow of information, including educational information.

The first requirement: Uses of the information resources:

The concept of "information resources" should be understood as a product of the intellectual activity of qualified workers. The use of information technologies predetermines the needs of modern society in the development of an information-active reserve. In this regard, the development of methodological approaches to the use of information technologies in order to implement the ideas of developing education, as well as the comprehensive development of the student's personality, becomes very relevant. So, for example, the activities of teachers should be aimed at the full development of the creative potential of a citizen, the formation of skills in predicting the main results of their activities, the ability to develop a strategy for finding ways and methods for solving both educational and practical problems.

No less important is the timely provision of the educational process with the latest psychological, pedagogical and methodological developments. They must create optimal conditions for the use of information technologies, intensify the educational process, and also raise the level of its effectiveness and quality. The relevance of the above provisions is determined not only by the social order, but also by the needs of individual citizens, their desire for self-determination, self-expression in the conditions of the modern stage of informatization⁽²⁾.

Priority attention should be paid to the characteristics of the capabilities of information technologies, their role in the intensification of the educational process, as well as the formation of methods aimed directly at the development of the student's personality. The capabilities of information technology include:

- instant feedback between the student and the teacher,

(2) Aisner L.Yu: Historical experience and modern prospects of information technology in distance 2019. p261-264.

- the possibility of computer visualization of educational information, the selection of the necessary objects and patterns of processes, phenomena, both real and virtual,
- access to archival storage of sufficiently large volumes of information with the subsequent possibility of its transfer, including fairly easy access to the central data bank,
- automation of processes of computational information retrieval activity,
- the possibility of correct processing of the results of a training experiment,
- the teacher's ability to repeatedly repeat a fragment of an educational experiment or the entire educational experiment,
- automation of information and methodological support processes,
- organizational management of educational activities, the ability to monitor the results of the assimilation of educational material by schoolchildren.

Characterizing the prospects for using the means of new information technologies in education, we note that at present, regardless of the participation of individuals in informatization, regardless of social status, solving the problems that arise before him, a citizen uses this or that information, as well as knowledge. At the same time, this information and knowledge is constantly increasing, the necessary experience appears. The intellectual potential of the society is gradually transferred to books, patents, as well as magazines, reports, ideas. They, in turn, are very actively used both in everyday life, in the industrial sphere, and in the scientific and educational fields. That is, the value of information, the proportion of information technology has increased dramatically. This gives us the opportunity to say that the priority in the process of informatization is played by information, which by itself does not produce certain material values. Under the concept of "information" it is necessary to understand the information

about the facts through which the society is aware of itself and has the ability to function as a single whole. It was:

- scientifically reliable,
- accessible to receive, understand and assimilate,
- the data that is extracted from the information must be substantial, as well as correspond to the modern scientific level. At the present stage of development, society is aimed at the active use of information as a social product. For this reason, a highly organized information environment is being created, which has a significant impact on all aspects of the life and activities of members of modern social relations.

The second title: Structure of the information environment includes:

- information objects,
Links between objects
- means and technologies for collection, accumulation, transmission, processing, production and dissemination of information,
- knowledge,
- organizational and legal structures that provide technical and legal support for information processes.

One of the directions is mathematization and informatization of subject areas. So, in particular, the use of information technologies within the framework of the implementation of the capabilities of the apparatus of mathematics, for example, in the field of mathematical statistics, provides an opportunity to automate as much as possible the processes associated with the processing of information, the necessary results of scientific experiments. The use of information technology provides an opportunity to apply the methods of mathematical

statistics in specific sociological research⁽³⁾⁽⁴⁾⁽⁵⁾.

Mathematization of educational activity provides an opportunity to improve the quality of decisions made at all stages without exception through the use of methods of analysis, forecasting, modeling and evaluation of results. The use of the above methods makes it possible to develop scientifically based approaches to making the most optimal decision in a particular situation, as well as to use the methods and means of informatics as much as possible in the framework of solving problems in different subject areas.

In almost all countries, full or partial closure of schools was accompanied by the transfer of students to distance learning. This situation can be considered as a global natural experiment on the intensive implementation of distance learning technologies in education^{(6) (7)}.

The first requirement: Situation of education in Russia in periode of "pandemic".

For the Russian Federation with the coronavirus, it developed relatively favorably and our country began to prepare for the arrival of the coronavirus in advance, adopting the experience of countries already faced with the pandemic. Much has been done, but one area of life that should now be paid more attention is school education.

(3) Batyrkhan T. Application of information technologies in teaching the solution of equations in mathematics lessons at school 2019. p 212-216.

(4) Germanova V.A., Kalinina K.A. Information technologies in personnel training 2019. No. 9-2. p132-134.

(5) Golyakova IV, Kulik AN, Goroshko E.Yu. The use of information technologies in teaching the population to safe life Fire safety: problems and prospects. 2019. T. 2. No. 1 (6). p 160-162.

(6) Dmitrieva M.N. Information technologies in teaching mathematics to foreign students at a medical university as a means of language and subject adaptation M . 2019. p329-333.

(7) Dmitrichenko M.I., Alekseev G.V., Zhilkina O.V., Kobitsky D.A. Information technologies for training commodity experts and technologists of public catering 2019.T.1. p237-238.

One of the problems is an attempt to continue out-of-school education through distance learning for schoolchildren.

Here we decided to follow the path of the Chinese example. However, the difficulties faced by most schools cast great doubt on the possibility of effective teaching of children using this method. The most important obstacle is the insufficient material and technical base for such activities both for schoolchildren and schools.

This is especially evident in the provinces, where schools are not equipped not only with the necessary equipment, but also there is often no normal Internet connection. Many schoolchildren do not have computers or Internet access. There is no domestic software. There are no general standards for distance learning.

As a result, a situation arises when some schools are establishing some kind of distance learning, while others teach at most 20-30% of students, and even then with a minimum efficiency⁽⁸⁾.

The effect of such distance learning is very weak and can extend the training by 2-3 weeks, no more. Then there is a total spread in the level of assimilation of knowledge between the main cities - Moscow, St. Petersburg and the rest of the country.

If you continue distance learning for a long enough time, then the level of knowledge differentiation among schoolchildren in different regions and cities of Russia will be very high and this will certainly affect the upcoming OGE and USE.

Only by uniting into a single whole - school administration, teachers, parents and children - can one hope for success in such an experiment. Yes, teachers have to spend a lot of time at the display screens, preparing electronic and remote lessons, presentations, conducting online lessons and classes with their pets and online

(8) Dmitrichenko M.I., Alekseev G.V., Zhilkina O.V., Kobitsky D.A. Information technologies for training commodity experts and technologists of public catering 2019.T.1. p237-238.

meetings with their parents. We must not forget that forced self-isolation increases the degree of neurotization in families, especially if there are several schoolchildren in one family, and technical capabilities are limited. A huge burden fell on the shoulders of the parents, who unwittingly became teachers.

The third title: Ways of teaching and adapting with the new situation in the pandemic:

First of all, it was necessary to decide on which platform to conduct lessons in a form that is new for all participants in the educational process. After analyzing all available services, my choice fell on Yandex.Textbook and Uchi.ru. For primary school, these two platforms are the most optimal.

Firstly, most of the junior schoolchildren are familiar with these services, as they perform all kinds of Olympiads and tasks in mathematics, Russian and English on their basis, and recently tasks on the world around them and programming have appeared there.

Secondly, on these two platforms, instructions for organizing and conducting distance lessons were developed and posted in a short time, webinars and advanced training courses for teachers "Digital literacy: a basic course for developing competencies of the XXI century" were organized, which allowed teachers to immediately engage in the process of mastering new competencies.

Third, the technical specifications for maintaining the service on these platforms are more accessible to both teachers and parents.

It should be noted that there are several differences between these two platforms in terms of organizing and conducting online lessons:

- the duration of an online lesson should not exceed 30 minutes, in the Yandex-Textbook the program itself monitors this, the teacher does not have the opportunity to shift the time frame of the lesson if necessary. Due to the fact that in this situation all the announced

platforms are overloaded, there is some inconvenience here. If we assume that, for technical reasons, not all students were able to connect to the lesson in time or not everyone understood the teacher's explanation, then it would be logical to finish the lesson a little later from the point of view of methodology;

- in Yandex.Textbook there is no way to insert ready-made video lessons or their fragments during an online lesson, which would be a good help for teachers. This service offers scheduled video broadcasts of lessons on its own schedule in accordance with the school curriculum for grades 5-11. This service is not provided for primary school.

On the Uchi.ru platform, there are no such nuances, the teacher finishes the lesson himself, you can insert a presentation made by yourself into an online lesson (so far only in PDF format), and a lesson (or its fragment) into the broadcast of the lesson. In addition, using a marker, you can emphasize something important in the presentation itself or a fragment of the lesson, and once again clearly explain to younger students.

Unfortunately, not all children have distance learning devices and Internet access. Because of this, many students skip online lessons. This problem is especially acute in rural areas. Video recording of lessons is not yet available on both platforms. In such cases, it is effective to post links to lessons from the Uchi.ru database into homework assignments in an electronic diary so that the guys keep up with their classmates who attended the online lesson.

The third requirement: Analysis of the selected research topic allows us to draw the following conclusions:

1. In dynamically developing social relations, it is no longer enough for schoolchildren to have certain academic knowledge, have critical thinking, but also have specific technical skills. In this regard, teachers and parents, starting at a very early age, strive to guide children to acquire the necessary knowledge in the field of

information technology. In addition, at present, the field of information technology is considered and analyzed as the most promising field of human activity. As a result, various computer courses, as well as information systems, have recently become the most popular. For this reason, many modern educational institutions have their own modern computer technology, the use of which is observed not only in the teaching of such a discipline as computer science, but also in teaching other school subjects.

2. It is worth focusing on the fact that in modern society, absolutely all members of society participate in the stage and processes of informatization, regardless of their legal status or social status. Citizens are forced to use the necessary information and knowledge in the process of their activities, solving systematically arising tasks for them. In this regard, the volumes of knowledge and practical experience are constantly increasing. The intellectual potential of society and its members is gradually increasing. He focuses actively on books, patents, journals, reports and ideas. Note that special knowledge is actively used at the modern technical level of development of society, that is, not only in everyday activities, but also in the following areas of knowledge:

- production area,
- scientific sphere,
- educational sphere,
- other types of activities of citizens.

Thus, the value of information, as well as the share of information technologies and services in the life and activities of a modern person and society, have increased significantly.

3. The modern educational process dictates to educational institutions the conditions in connection with which it is necessary to develop students' creative abilities. This requirement stipulates the need for schoolchildren to work with information that is provided to

them by a teacher, and is also formed by them independently in the form of objects of creative educational products. The solution to this problem is due to the development of both design and information technologies in the framework of the study of historical science. Note that in this situation, information technologies, which were initially aimed at the formation of various information products, for example, texts, presentations, have a high creative potential, and therefore can become a very effective tool both in the hands of schoolchildren and in the hands of modern teachers.

4. The process of using research and design technologies in the teaching and learning of history is due to the need to study the full-scale base of historical sources. In addition, they are not always readily available in school libraries. In the context of the teaching and upbringing process, the following information technologies are used:

- active use of electronic teaching aids,
- search for information in the global Internet.

Conclusion:

The use of the above technologies provides an opportunity not only to store and transmit information, but also to significantly increase the level of information saturation of the lesson, go beyond the content of the school curriculum, school textbook, as much as possible to supplement and deepen their content. what happened in the 2020 after the spread of the "Corona" pandemic across the world and affected many sectors, especially the education sector, as the educational process was paralyzed for intermittent periods and after that all universities and schools moved to the education system of distance or system "online" as it is called, and therefore they had to seek assistance. With new technological tools to facilitate communication and communication between teachers, students and parents.

Here, the importance of digital technology has emerged in our lives and how it has a large and influential role in helping to overcome epidemics and natural disasters that could be get in the way of people.

Digital technology played a big role in facilitating the educational process during the pandemic period, despite the home quarantine imposed by countries, the closure of schools and universities and the conversion of the regular system to a distance learning system, but the educational program in many countries continued in a good way and made students use digital applications. They learn more through digital technology from primary school students to university levels.

This has constituted a new task of great importance for educational institutions by modifying the educational process, so that schools' children have the opportunity to participate in technical activities and use digital media to keep up with the development of modern society, which is closely related to informatics and technology.

The modern educational process dictates the need to develop different creative abilities in schoolchildren. That is, schoolchildren are required to be able to work with different types of information, both with the information provided by the teacher and with the information independently formed by them in the process of teaching and mastering the discipline.

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