FaR 2021
International Forum "Freedom and responsibility in pivotal times"

ATTITUDE OF THE EDUCATIONAL PROCESS PARTICIPANTS TO DISTANCE LEARNING

I. G. Kondaurova (a)*, L. A. Filipovich (b), E. A. Ryabokon (c), G. G. Tupikina (d),
A. E. Kondaurova (e)
*Corresponding author

(a) Kuzbass State Agricultural Academy, 5, MarkovtsevaStr., Kemerovo, Russian Federation,
kondirina08@mail.ru
(b) Kuzbass State Agricultural Academy, Kemerovo, Russian Federation
(c) Military Academy of Communications named after S.M. Budyonny, St. Petersburg, Russian Federation
(d) Kemerovo State University, Kemerovo, Russian Federation
(e) St. Petersburg State Electrotechnical University "LETI" named after V.I. Ulyanov (Lenin), St. Petersburg, Russian
Federation

Abstract

The introduction of digital technologies is manifested in almost all areas of professional activity, including education. The transformation of education in the context of digitalization radically changes the approach to the educational process and the lifestyle in general. Currently, the priority task facing the education system is the creation of an open education system that provides open access to educational resources based on digital technologies. The use of digital technologies in the educational process is becoming a requirement of the time, which makes it possible to organize a student-centered educational process for each student on the basis of individual educational trajectories, and also ensures the availability of education regardless of their location. Digitalization in education allows presenting studying material in a new way, work with images, sound, video materials, as well as conduct webinars, video conferencing and classes on various platforms, which contributes to increasing the motivation of learning and more solid assimilation of educational material. The results obtained determine the advantages and disadvantages of distance learning, in comparison with traditional education. The main advantage is the ability to study at a convenient time. Among the shortcomings, two of the most important were identified: the lack of personal contact with the participants in the educational process and a large amount of time spent at the computer, which contributes to the deterioration of vision and posture. The results of our research allow to state that the majority of respondents are currently not ready to fully switch to a distance learning format.

Keywords: Distance learning, education, students, educational process, digital technologies, digitalization

1. Introduction

According to the Federal Educational Standards of the new generation, special attention is paid to the need to form professional and general cultural competencies in order to become competitive specialists. The introduction of digital technologies in all spheres of life requires a new quality of education from the graduate. The presence of highly qualified personnel in the labour market contributes to the development and implementation of new technologies, the development of production and, as a result, the rise of the country's economic level. In this regard, one of the urgent tasks of Russian education is the transformation of education in the context of digitalization, which radically changes the approach to the educational process and the way of life in general. As before, the main goal of the educational process is to improve the quality of education and ensure the necessary educational level that meets the requirements of modern society.

The use of digital technologies at the present stage of the development of society is manifested in almost all spheres of professional activity, including education. With the introduction of digital technologies into the educational process, learning opportunities are significantly expanding for both teachers and students. Teachers have an opportunity to participate remotely in various webinars, video conferences, take advanced training courses on various online platforms, exchange experiences, learn and create content, and as a result, present educational material in a more interesting and effective manner. Students also have an opportunity to gain and deepen their knowledge by watching various video materials through the Internet resources. The Internet is filled with a large number of services (forums, chats, e-mail, skype, zoom, etc.), which are conveniently combined in the educational process. …All these opportunities can be used as an addition to traditional forms of education, effectively increasing the communication between the teacher and students (Bykov et al., 2008).

2. Problem Statement

The use of digital and distance learning technologies in the educational process is an essential component to ensure access to educational resources, which allows organizing a personality-oriented educational process for each student. Nevertheless, with the introduction of digital technologies into the educational process, there are both advantages and disadvantages associated with distance learning, which were the subject of the research.

3. Research Questions

The penetration of digital technologies into all spheres of human life requires a new quality of education from the future specialist. Elementary literacy formed by the existing education system is not enough today. «More than 50% of workers perform work where the required literacy level can be replaced by a computer. Only 13% of them have a literacy rate that exceeds the level of intelligent computer systems (present or expected in the next ten years). At the same time, the proportion of workers with a high level of general literacy has decreased compared to the nineties» (Karakozov & Uvarov, 2016; Kozlova, 2019).

There have been significant changes in the field of distance learning in the world, especially during the outbreak of COVID-19, as a result of which the importance of introducing digital technologies into the

education systems of different countries became obvious (Gourari et al., 2021; Putri & Maknun, 2021; Sekulovska & Tosheva, 2021; Stoklosa et al., 2021).

The modern education system needs fundamental changes. Among many tasks facing the education system at present, the priority one is the task of creating an open education system that provides open access to educational resources based on digital technologies. Digital technologies in education mean the organization of a modern educational environment based on digital technologies. Digitalization affects not only the content of education, but also its organization. The use of distance learning technologies in the educational process is becoming a requirement of the time, allowing to organize a personality-oriented educational process for each student, built on the basis of individual educational programs and trajectories. Distance learning technologies are understood as educational technologies implemented mainly with the use of information and telecommunication networks with indirect (at a distance) or not completely mediated interaction between students and teachers (Akimova & Shcherbin, 2018; Khaibullin et al., 2019). The introduction of distance learning technologies into the educational process ensures the availability of education for students, regardless of their location and state of health.

Federal state educational standards of higher education provide for an increase in the share of independent work of students due to the introduction of innovative educational technologies into the educational process of the university (Kondaurova & Filipovich, 2020). The teacher from the bearer of the transmitted knowledge turns into a mentor who assists in the acquisition and structuring of knowledge. And as a consequence, the goal of the educational process is not only the assimilation of knowledge, but also the ability to receive information from other sources, the formation of the cognitive interests and needs of students, as well as the development of their creative potential.

One of the priority areas in the current epidemiological situation was the rapid introduction of distance learning into the educational process for all participants in the educational process (schoolchildren, college and university students, teachers and professors) based on digital technologies. The use of distance learning technologies in the educational process is an essential component for providing access to educational resources in the system of open educational space. Classes organized using distance learning technologies assume that students and teachers are outside the classroom.

4. Purpose of the Study

The purpose of our study: to study the attitude of participants in the educational process to distance learning, that is, the opinion of those who were forced to study or teach in a distance format.

5. Research Methods

The article presents the data of the research conducted in the academic year of 2020-2021, participants of the educational process (students, schoolchildren, teachers and teachers) were from different regions of Russia (Kemerovo, Novosibirsk, Tomsk, Yekaterinburg, Saint Petersburg, Moscow).

In the process of studying, the following methods were used:

▪ private research methods: observation, reviewing, analysis and generalization of scientific literature on the research problem, substantiation of the theoretical and methodological basis of the research; study, analysis and generalization of pedagogical experience.

▪ a questionnaire was created on the Google Forms platform by authors of the article.

All obtained statistical data were subjected to mathematical processing in Microsoft Office Excel: working with tables, calculating averages, percentages, building graphs and diagrams.

6. Findings

In March 2020, all educational organizations in Russia were introduced to a distance-learning format, and therefore, there were many discussions on this topic.

Parents of students and representatives of professions not directly related to the sphere of education actively expressed their opinion: someone was dissatisfied that now it is necessary to independently deal with their child; some believed that distance learning reduces the quality of education; some fully supported the transition to distance learning.

In this regard, we conducted a study of the opinions of participants in the educational process regarding their attitude to distance learning.

The survey involved students, schoolchildren, teachers and teachers - a total number of 213 respondents.

The survey covered different regions of Russia (Kemerovo, Novosibirsk, Tomsk, Yekaterinburg, Saint Petersburg, and Moscow).

To conduct the research, the scientists created a questionnaire on the Google Forms platform, which allowed obtaining data from different educational institutions and localities.

The survey involved respondents aged 16 to 65 years.

Based on the results of answers to the question "What is your occupation?" we see that the majority of respondents are students (Figure 01). Among the respondents, 29 people are teachers and university professors, which is 13.6%, schoolchildren - 18 (8.5%) and students - 166 (77.9%).

When analyzing the answers to the question "Have you encountered any difficulties in mastering distance learning?", it was concluded that most of the participants in the educational process have successfully overcome the minor difficulties that have arisen with the development of distance learning technologies (Figure 02).

Among the respondents, 31.5% practically did not experience difficulties, while 48.4% had minor difficulties. Nevertheless, 43 respondents experienced many difficulties, which is 20.2%.

Answering the questions about the load changes on the participants in the educational process, most of the respondents believe that the load has increased, both on teachers and students (Figure. 03 and Figure 04).
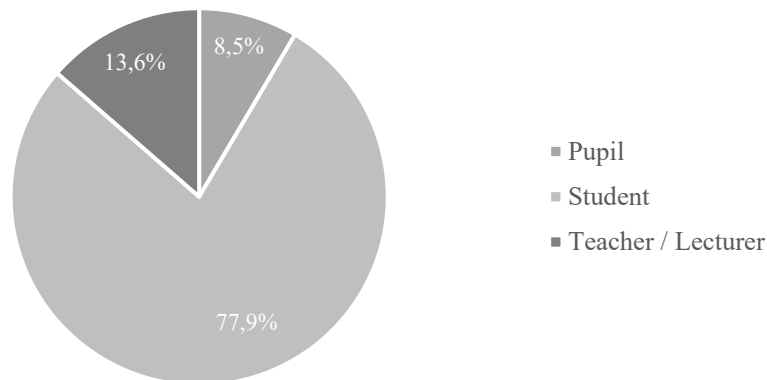
What is your occupation?

Figure 1. Percentage of survey participants by occupation

Have you encountered any difficulties in mastering distance learning?
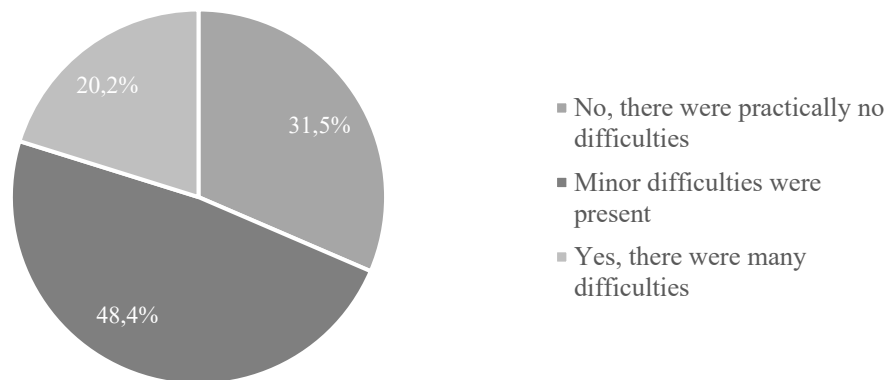

Figure 2. Correlation of answers for the question "Have you encountered any difficulties in mastering distance learning?"

Thus, 56.8% believe that the educational load on pupils / students has increased, 33.3% note that it has not changed, 9.9% say that the load has decreased.

However, with regard to teachers, the survey shows that 69% of respondents believe that the workload on teachers has increased, 19.2% - has not changed, and 11.7% note that the workload has decreased. In the authors' opinion, the load has increased significantly for all participants in the educational process, especially for teachers. Since additional preparation for each lesson is constantly required,

mandatory control over the implementation of tasks of students, the organization of feedback for answering questions that cause difficulties in completing tasks.

Summing up the work of the participants in the educational process, within the framework of distance learning, the following results were received (Figure 05 and Figure 06).

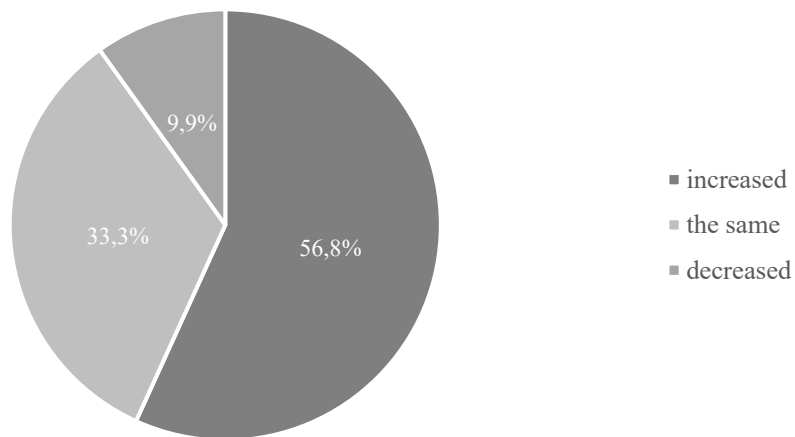**In your opinion, has the study load for pupils / students during the quarantine period changed?**

Figure 3. Distribution of answers about the study load on pupils / students during the quarantine period

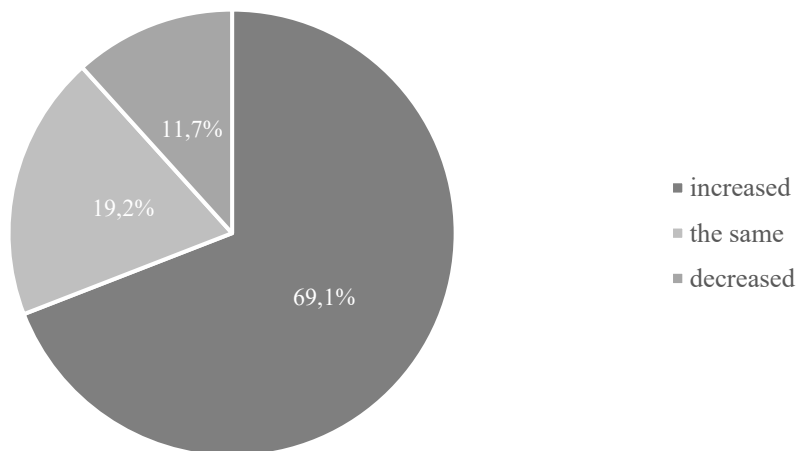**In your opinion, has the workload on teachers during the quarantine period changed?**

Figure 4. Distribution of answers about the workload on teachers during the quarantine period

How do you assess the work of the teaching staff in the framework of distance education?
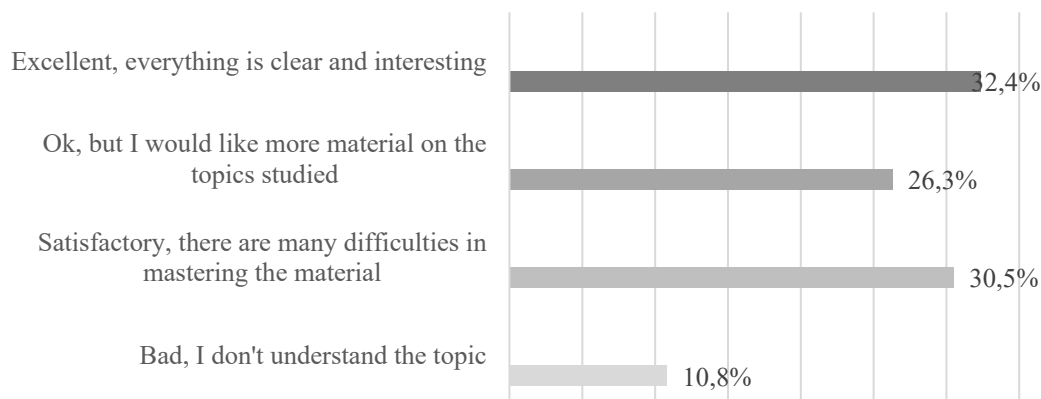

Figure 5. Opinions of students about the work of the teaching staff

In the opinion of the students, the work of the teaching staff can be assessed as follows: 32.4% - excellent, everything is clear and interesting; 26.3% of respondents - "good, but I would like more material on the topics studied"; 30.5% - "satisfactory, there are many difficulties in mastering the material" and 10.8% of students assess the work "poorly, I don't understand the topic". Based on the answers received, it was concluded that a modern teacher has to constantly improve, since digital technologies are rapidly developing, and the development of educational materials is required in accordance with the requirements of the time.

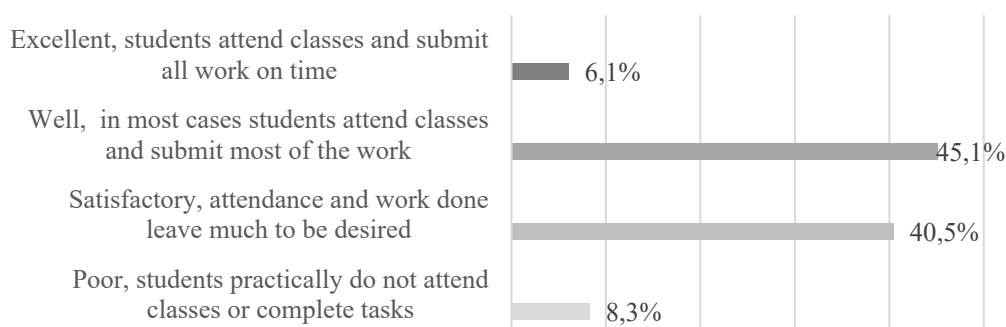**How do you assess the work of students in the framework of distance education?**

Figure 6. Opinions of teachers about the work of students

According to the teachers' answers, 6.1% rate the work of students as "excellent, students attend classes and submit all work on time"; 45.1% assess it as "good, students in most cases attend classes and pass most of the work", 40.5% consider it to be "satisfactory, attendance and the number of completed

works leave much to be desired" and 8.3% say that it is "poor, classes are practically do not attend, do not carry out tasks". Figure 07 shows the results of self-assessment of the motivation level of participants in the educational process to learning (students), working (teachers) in the framework of a distance learning format.
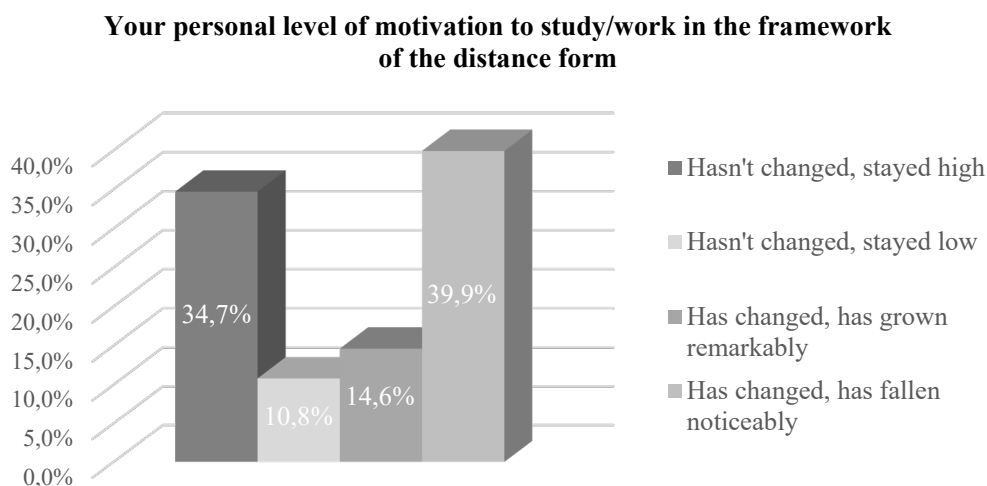
Your personal level of motivation to study/work in the framework of the distance form

Figure 7. Self-assessment of the motivation level of participants in the educational process in the framework of the distance-learning format

Thus, 34.7% of respondents say that the level of motivation has not changed, it has remained high; 10.8% - the level of motivation has not changed, remained low; 14.6% - the level of motivation has changed, increased significantly; 39.9% state that the level of motivation has changed and has dropped markedly.

The analysis of answers to the question about the assimilation of educational material in a distance-learning format in comparison with the traditional way of training is presented in Figure 08.
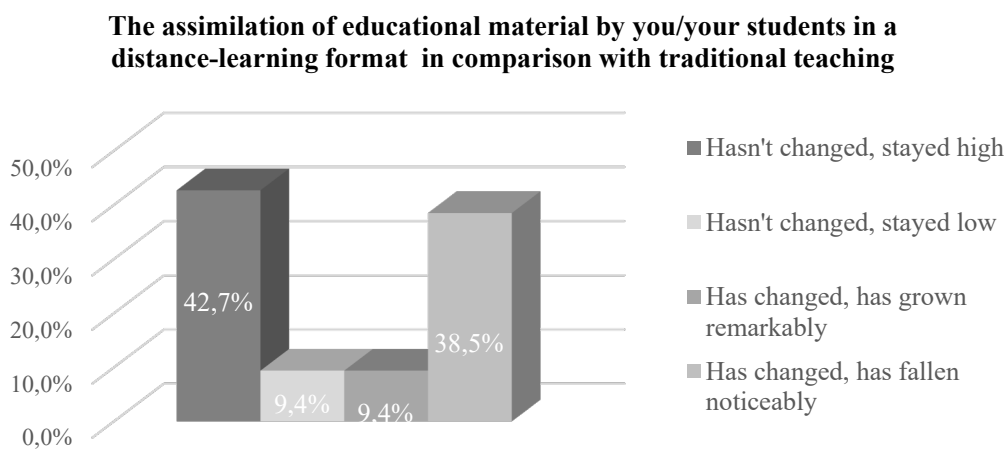
The assimilation of educational material by you/your students in a distance-learning format in comparison with traditional teaching

Figure 8. Self-assessment of the level of educational material assimilation by the participants of the educational process in the framework of the distance format

The survey showed the following results: 42.7% of respondents believe that the assimilation of educational material in the distance format has not changed, remained at a good level; 9.4% note that the assimilation of educational material has not changed, remained at a poor level; 9.4% - the assimilation of educational material has changed, it has become better; 38.5% state that the assimilation of educational material has changed, it has become worse.

Having carried out a comparative analysis of Figures 7 and 8, it can be concluded that the number of respondents who noted that the level of motivation has dropped markedly (39.9%) and the number of respondents who noted that the assimilation of educational material has become worse (38.5%) is almost the same.

Thus, with the constant occurrence of difficulties in the process of studying the educational material, the level of their perception and assimilation decreases, and the level of motivation for learning also decreases. It should be noted that the majority of respondents who state that the assimilation of educational material remained at a good level (42.7%) have a high level of motivation to learn (34.7%).

In order to determine the advantages and disadvantages of distance learning, when compiling the questionnaire, great attention was paid to the personal attitude of the participants in the educational process to learning in a distance format. Among the presented answer options, respondents could choose one or more answer options, and they could add their own answer.

The research has shown that respondents single out the following as advantages: no need to waste time on the way to the place of study / work (76.1%); the opportunity to study at a convenient time (61.2%); the opportunity to spend more time with family (40.4%); it became easier to write off (15.6%); lack of personal contact with the teacher / students (14.6%); the opportunity to work additionally (13.4%); it is comfortable to study / work at home (11.2%); the ability to record a lecture and include a video recording (0.5%); there are no advantages (13.1%).

Among the shortcomings, the survey participants single out the following ones: lack of personal contact with the teacher / students (70.6%); lack of personal contact with classmates / classmates / colleagues (52.3%); technical support makes it difficult to work / study (61.6%); relatives in the apartment interfere with studying / working (22.5%); it became easier to write off (21.7%); it is difficult to find a secluded place to study in a hostel (13.4%); communication with a teacher (it is difficult to get an answer to your question in a timely manner) (11.2%); a lot of time is devoted to working at the computer, and as a result deterioration of vision, posture (7.5%); involvement in the learning process disappears (5.6%); a lot of tasks (2.5%); I don't understand anything (0.5%); no shortcomings (3.8%).

It should be noted that the answers "it became easier to cheat" and "lack of personal contact with the teacher / learners" were noted as advantages and disadvantages.

Considering the question about the possibility of transferring training to a distance learning format, the opinions of the survey participants were practically divided by half (Figure 09).

In your opinion, is it possible to completely transfer education to a distance learning format?
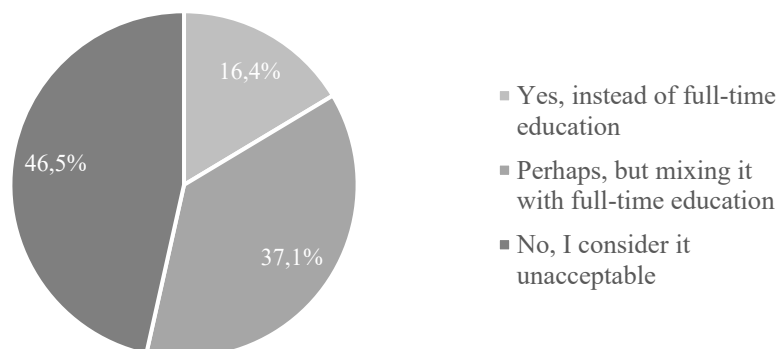

Figure 9. Opinions of survey participants about the possibility of transferring education to a distance format

46.5% of the respondents consider such transferring inadmissible. The second half of the respondents (53.5%) believe that it is possible to transfer education to a distance format, but most of them (37.1%) note that distance learning should not supplant full-time education, it should coexist on a par with full-time education.

7. Conclusion

Thus, in the context of the digital transformation of education, a computer, tablet, or telephone have become universal tools for working with all types of information. The use of digital technologies in the educational process makes it possible to provide educational material in a new way, work with images, sound, video materials, as well as conduct webinars, videoconferences and classes on various platforms, which contributes to increasing the motivation of learning and the assimilation of educational material.

However, the overwhelming majority of respondents are not ready to completely switch to distance learning. The survey showed that distance learning should not completely replace traditional education; it should complement it, since nothing can replace live communication between students and a teacher. In the course of the classroom session, having feedback from the students, the teacher can restructure the presentation of the educational material, making it more understandable and accessible. Therefore, we believe that today the most optimal is "blended learning", which is based on the principles of personalization, complete assimilation of knowledge, high achievements and responsibility for the choice of the learning method and the results obtained. Nevertheless, digital technologies have already entered our lives and people must be able to use them.

References

Akimova, O. B., & Shcherbin, M. D. (2018). Digital transformation of education: timeliness of educational and cognitive independence of students. *Innovative Projects and Programs in Education, 1,* 27–34.

Bykov, V. E., Kukharenko, V. N., & Sirotenko, N. G. (2008). *Technology for the Development of a Distance Course*. Millennium.

Gourari, A., Skouri, M., & Ouatik, F. (2021). The implementation of deep reinforcement learning in e-learning and distance learning: remote practical work. *Mobile Information Systems,* 1–11. https://doi.org/10.1155/2021/9959954

Karakozov, S. D., & Uvarov, A. Yu. (2016). Successful informatization - transformation of the educational process in the digital educational environment. *Problems of Modern Education, 2*, 7–19.

Khaibullin, A. R., Iusupov, R. G., Ershov, V. F., Valeev, A. S., & Sitnova, I. A. (2019). Development of innovative technologies in education. *International Journal of Recent Technology and Engineering*, *8*(3), 5947–5951.

Kondaurova, I. G., & Filipovich, L. A. (2020). Implementation of the educational process with the use of distance educational technologies. *Modern Technologies in the Field of Agricultural Production and Education. Electronic Materials*, 131–134.

Kozlova, N. Sh. (2019). Digital technologies in education. *Bulletin of the Maikop State Technological University, 1/40,* 83–91.

Putri, N., & Maknun, L. (2021). Role of teachers in achieving distance learning outcomes. MUDARRISA: *Jurnal Kajian Pendidikan Islam, 13,* 55–73. https://doi.org/10.18326/mdr.v13i1.55-73

Sekulovska, A., & Tosheva, E. (2021). New technologies and the growth of information. *Alternative Paths to Education in Developing Countries, 12,* 68–73.

Stoklosa, K., Ding, Ch., & Yanagawa, B. (2021). Analyzing the impact of onsite vs. offsite lectures on medical student lecture participation: Case study of the University of Toronto Faculty of Medicine. *University of Toronto Medical Journal, 98,* 71–77.