

Article

Emergency Distance Education in the Conditions of COVID-19 Pandemic: Experience of Ukrainian Universities

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Abstract: The COVID-19 pandemic has brought significant changes in education worldwide throughout 2020. In Ukraine, the preparedness for this process was different. There were various technical problems such as the absence of Internet connection, computers, or educational materials on the network, and most importantly, the unpreparedness of teachers to perform distance learning. From 28 April to 8 May 2020 at the Oles Honchar Dnipro National University (Dnipro, Ukraine), students were surveyed on the quality of distance learning organized during the quarantine period. A total of 1224 students from almost all faculties and centers took part in the survey and answered 19 questions in an online form developed in Office 365 (Microsoft Corporation, Redmond, WA, USA). The survey algorithm is based on the principle of cross-validation. According to the survey, the most important opportunities of distance (digital) learning are as follows: the opportunity to study in a convenient place, in a comfortable and familiar environment—28.57%; the opportunity to combine work with study—16.97%; the development of self-control skills and motivation to self-educate—16.43%; and the technical level of the learning process (use of information technologies)—13.83%. The aspects that negatively affect the organization of full-scale distance learning are as follows: the large volume of tasks—16.80%; the rapid fatigue due to prolonged work in front of a computer—16.35%; the absence of necessary equipment and/or constant (stable) access to the Internet—15.33%. In conclusion, ways to overcome the difficulties of distance learning, both by universities and by the government, are suggested.

Keywords: distance learning; COVID-19 pandemic; psychological barrier; technical barrier; student



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1. Introduction

In March 2020 UNESCO Director-General Audrey Azoulay stated that due to the COVID-19 coronavirus pandemic more than 1.5 billion young people in 165 countries could not attend classes due to the closure of secondary schools [1].

The introduction of quarantine has changed the lives of everyone, but it especially affected educational institutions, forcing people to adapt to the new conditions of provision of educational services. Nevertheless, the issue of distance learning remains more relevant than ever in the context of the coronavirus pandemic.

Quarantine, which in early spring 2020 seemed a temporary measure, became long-lasting and acquired signs of a “new reality”. Education is one of the areas that suffers the most from such new living conditions.

All educational institutions, including universities, were forced to respond quickly to the challenges of the pandemic and transfer the educational process to distance or hybrid

(blended) modes. Teachers of Ukrainian universities literally in one day adapted their subjects to a distance format. Most of them had no experience in using online tools, no skills of remote communication with students, or lacked the appropriate methodological and technical support for remote teaching of their courses. The practices of distance learning, which have developed both in different institutions of higher education (HEIs) and within one university, faculty, and even a department, are very different and diverse [2]. Teachers use different programs and platforms, conduct classes with or without presentation materials, with or without interactive methods, adapt their courses to a remote format or simply use video conferencing instead of traditional classrooms. There are some Ukrainian universities that have systematically organized the process of distance learning, but in a number of HEIs, the educational process has become chaotic and continues to be a challenge and a test for both faculty and students [3]. This, in turn, leads to growing skepticism about the quality of such a learning process and rightly raises in society the question: “Can online learning be effective?”

However, in the context of this discussion, online education should be clearly separated from emergency remote teaching. The term “emergency remote teaching” is already widely used and discussed by foreign experts and is clearly separated from the established terminology of online education (online education, e-learning).

In the modern world, in the field of pedagogical education there are two conceptually opposite theories of learning: online learning and distance learning.

Online learning is often a forced form, which largely inherits the methods of classroom learning. It has its advantages such as ease of demonstration of presentations and video materials, online testing, etc., but it also has some disadvantages. In addition, it has both purely technical disadvantages such as communication problems and fundamental ones, for example, the lack of contact—both visual and emotional—between teachers and students [4].

Distance learning is a fundamentally different approach to communication and a different structure of learning. In distance learning, a teacher may not meet with students in online broadcasts at all, but only follow them in a chat if necessary [5]. Distance learning offers a wide range of technical means such as audio podcasts, videos, various simulators, and online tests. However, the main feature of distance learning is a thorough tracking of student performance, building his or her individual trajectory. While online learning tries to inherit the methods of classroom learning, distance learning has a computer game model, new levels of which can be opened only when the previous ones are passed.

Online education is a well-thought-out, consistent, and pre-planned process and involves appropriate methodology and design of subjects and educational programs. On the other hand, emergency distance learning is used in response to crisis situations, and the design of subjects and educational programs is developed for traditional classroom learning.

Emergency distance learning can be used temporarily in “emergency mode”, but if such a mode becomes a “new reality”, it is worth thinking about the transition to online education with its laws, rules, methodology, techniques, and practices. This is not a simple and resource-intensive process.

Let us analyze the basic concepts of distance education as a separate modern form of learning used in scientific studies.

Xie J. and Rice M.F. distinguish two types of distance learning, which depend on the nature of the organization of educational communications between participants in the educational process and its organizers, the method of building a communication channel of the educational environment, and the means of information transfer [6]. The first type is traditional distance learning, which is an extramural form of study, the second type is e-distance learning, which is characterized by synchronous and asynchronous interaction between participants and organizers of the educational process and the predominant and fundamental use of electronic learning systems, the Internet, multimedia training means, and information and communication technologies.

Yilmaz Ince E., Kabul A. and Dealer İ. consider distance learning as a fundamentally new form of learning, as a system. They identify key components of the distance learning system, including the distance learning environment (platform) with the necessary means of communication, the base of educational materials (lectures, electronic literature, video and audio materials), monitoring and assessment tools (practical tasks, testing, forums, web-quests, scribing, etc.), the participants (subjects) of distance learning, and technical specialists (programmers, administrators) [7].

According to Karakaya K., it is important to separate the concepts of the education system and the educational process. The essence of this separation is that the education system involves a design stage while the educational process is the implementation of the system developed at the design stage in the real activities of teachers and students [8]. Distance education is not a modernization or analogue of an extramural form of study but is introduced as a fundamentally new form of learning. The difference between these forms is the factors of interactivity, the means of implementing all components of the education system, the specifics of using Internet services in distance education, etc.

It should be noted that in the scientific and pedagogical literature, the terms “distance learning” and “distance education” are often used interchangeably. However, they differ significantly from each other, the same as the general pedagogical concepts of “learning” and “education.”

When analyzing the phenomenon of distance education, we should also dwell on the analysis of the definition of “open education”, which is used in many scientific journals of post-Soviet countries in relation with the development of distance learning.

Talidong K.J.B., when analyzing the state of development and the main means of open education today, emphasizes the various purposes and objectives of these types of education: if distance education is developed in the area of increasing the level of access to education for people who have not been able to receive it for various reasons, then the tools of open education are largely intended for improvement of the quality of education [9].

Thus, open education, in contrast to distance education, is focused mainly on finding new methods and techniques of teaching, updating the preparation and organization of the educational process, and new technologies are important only in the context of their creative use in the education system.

According to Duarte F.B.D.M.D. and Maknamara M., e-learning primarily involves the use of Internet technologies to ensure the effectiveness of knowledge acquisition and is based on three key principles: studying is carried out over a network; the delivery of educational content to the end user is carried out with the help of a computer using standard Internet technologies [10].

E-learning is often used as a synonym of web-learning and online-learning. So, the term can be understood as the intensive use of computers, multimedia, Internet resources, and remote communication systems in learning. During e-learning, students mostly work independently with electronic materials (textbooks, courses, educational systems) while receiving distance consultations from a teacher over the Internet. Similarly, Internet communities are created including those who study on the same course of a certain teacher who carries out online consultations, receives and checks the tasks of students, and keeps track of their performance.

The spread of e-learning has led to emergence of a new type of learning—blended learning. Blended learning (hybrid, mixed, integrative learning, technology-mediated instruction, web-enhanced instruction, mixed-mode instruction) is a form of education according to which a student learns one part of the material by means of distance learning, and the rest of the material is studied in person in a classroom.

Emergency distance learning is a temporary transition of the educational process to an alternative mode of learning due to crisis circumstances. In this situation, the main purpose is not to reproduce a sustainable educational ecosystem, but rather to provide temporary access to learning and learning support, which are easy to set up and make available during an emergency or crisis.

According to Bhowmik S. and Bhattacharya M.D., blended (hybrid) learning is one of the most popular technologies today, because it makes it possible to take advantage of the flexibility and convenience of the distance course and the benefits of the traditional classroom learning [11].

Let us consider in more detail the modern definitions of this concept.

Thus, Al Lily A.E., Ismail A.F., Abunasser F.M. and Alqahtani R.H.A. and other foreign researchers interpret blended learning mainly as a combination of traditional formal learning tools—classroom work, theoretical material study—and informal ones, such as e-mail correspondence or Internet conferences [12]. That is, in blended learning, the theoretical material is studied independently through an e-learning course, and during classroom work, relevant skills and abilities are practiced and consolidated with the help of game methods, active discussions, finding solutions, solving problems, etc.

Zhou T., Huang S., Cheng J. and Xiao Y. consider blended learning to be a system that combines different ways of presenting learning material, including courses based on web technologies, EPSS (Educator Performance and Support System), and knowledge management techniques. This term also characterizes learning that combines its different forms: face-to-face learning, live e-learning, and self-paced learning [13].

Ferri F., Grifoni P. and Guzzo T. believe that blended learning combines seemingly opposite approaches: formal and informal learning, face-to-face and online communication, managed actions and independent choice of path, use of automated references, and relations with colleagues to achieve individual goals and the goals of the organization [14]. Nurul M.K.Z. insists on the integration of traditional and distance communication, the formation of an integrated learning environment [15].

So, blended learning can be defined as a hybrid type of learning that combines the latest technologies with traditional forms of learning.

One of the advantages of gaining knowledge in quarantine is that Ukrainian universities are allowed to independently organize the process taking into account the technical base and the capabilities of teachers and students, that is, how to follow the curriculum, what subjects need to be revised when students are able to go to university, etc. However, Ukrainian educators did not receive clear explanations and recommendations from the Ministry of Education and Science of Ukraine, which effectively shifted all responsibility to the university administration.

The main advantage of distance learning over face-to-face training is, first of all, its convenience: a student independently chooses the time and place for study, which allows him to work or study in-person in another city or even country. In addition, the replacement of lecture notes with electronic resources and the latest learning methods, as well as constant consultations with a teacher give this form of self-education additional advantages over distance learning.

When analyzing the scientific literature, one can see that researchers emphasize the convenience of distance learning and highlight many of its advantages over other forms of learning, namely:

- the opportunity to study at any time. A student who studies remotely can decide for himself when and how much time to spend on studying the material during the semester. He builds an individual training schedule for himself;
- the opportunity to study at one's own pace. Students who study remotely do not have to worry about falling behind their coursemates. One can always return to the study of more complex subjects, watch video lectures several times, reread correspondence with a teacher, and already known topics can be skipped;
- the opportunity to study anywhere. Students can study without leaving home or office, anywhere in the world. To start learning, one only needs to have a device with Internet access;
- high learning results. According to the studies of American scientists, the results of distance learning are not inferior or even superior to the results of traditional

- forms of learning, although most of the educational material is studied by a student independently;
- mobility. Communication with teachers and tutors is carried out in different ways: both online and offline;
 - learning in a relaxed atmosphere. Midterm assessment of distance learning students takes the form of online tests. Therefore, there are fewer reasons to worry before meeting with teachers in tests and exams. The possibility of subjective assessment is avoided: a system that checks the correctness of the answers to the test questions will not be affected by the success of a student in other subjects, his social status, and other factors;
 - an individual approach. In traditional learning, it is difficult for a teacher to pay the necessary amount of attention to all members of the group, to adjust to the pace of study of each of them. The use of distance learning technologies is suitable for the organization of an individual approach. A student chooses the pace of study, he can quickly get answers to all questions from his tutor;
 - convenience for a teacher. Teachers, tutors, and lecturers engaged in distance teaching can pay attention to more students and work, even if for some reason they are forced to be at home.

However, it should be noted that along with numerous advantages, distance learning has many disadvantages.

Owen P. Hall, studying how COVID-19 affects the future of education management, notes that many business schools have quickly responded to COVID-19 by increasing their online presence as a temporary short-term measure [16]. Some business schools, in order to remain competitive in a fairly dense market, propose online programs at prices 50 percent lower than those of their conventional programs. In addition, in order to facilitate the fast transition to distance learning, many business schools have turned to the online software development community, whose popularity is now rapidly gaining momentum.

Scientists Brammer S. and Clark T., in their paper on COVID-19 and education management, note that spreading in January and February of 2020, the impact of COVID-19 on universities and business schools was reflected in the academic year, with students being the most vulnerable stakeholders, and it was their interests that became the center of attention of business schools in the development and implementation of appropriate measures [17]. Issues concerning the need to send students abroad during the crisis have become particularly acute. At the same time, the authors note that the large-scale economic consequences of COVID-19 have led to a significant number of students experiencing difficult financial times, including foreign students stuck in the country of learning throughout the pandemic. Brammer S. and Clark T. state that COVID-19 has led to significant innovations at the University of Bath School of Management (UK) and the Management University (Singapore), which are related to the processes and timing of learning management. These new ways have significantly increased the flexibility and innovative potential of the courses and programs that exist in these higher education institutions.

In particular, as noted by scientists Berezhna S. and Prokopenko I. in their publication, COVID-19 encourages higher education institutions in Ukraine to implement innovative solutions in a relatively short period of time and to introduce distance learning using various web services, platforms, resources and social networks [18]. Therefore, in March 2020, the Department of Political, Social and Cultural Studies of Skovoroda Kharkiv National Pedagogical University (Ukraine) conducted an online survey on socio-economic issues during the coronavirus pandemic among Ukrainian students and teachers of higher education institutions. The survey showed both the pros and cons of online learning. The results of this survey gave the authors of the study the opportunity to identify the difficulties and advantages of implemented distance learning, including the following disadvantages: technical issues and psychological problems.

Reality has shown that not all higher education institutions are technically prepared, so lectures and seminars were conducted using the Google Classroom (Google. Mountain

View, CA, USA) service, knowledge was assessed with the help of text tests, and the preparation and presentation of projects was conducted via Skype (Skype Limited. Luxembourg City, Luxembourg), new platforms, resources, and social networks (Moodle (GNU GPL. Boston, MA, USA), Zoom (Zoom Video Communications, Inc. San Jose, CA, USA), Skype (Microsoft Corporation. Redmond, WA, USA), Viber (Viber Media S.à r.l. Luxembourg City, Luxembourg), Telegram (Telegram Messenger Inc. London, UK) and Messenger (Facebook. Menlo Park, CA, USA) [19]. In addition, teachers, as additional material, began to use external distance learning systems (Prometheus platform (Prometheus. Kyiv, Ukraine)) [20].

Students note the following psychological problems [21]: lack of live communication, inability to retake missed practical classes, significant increase in the volume of assignments, lack of time to complete assignments, obligation to fulfill family responsibilities for control/care for younger brothers while schools are closed for the period of online classes, limited computer access as the parents are also transferred to remote work.

In 2018, the Times surveyed 200 leaders from different universities, and they all believed that online learning could never replace the internal study mode and being at a real university [22].

For many students, the value of university education is not just in getting a qualification. Almost 60% of recently surveyed students and graduates said that university life has helped them socially, they have become more independent and confident, and they have learned to work in a team and manage their time [23].

In June, the University College of London published the results of a new study which showed that two million British schoolchildren studying from home actually do nothing at all during quarantine [24]. It turned out that, on average, schoolchildren studied via the Internet only two and a half hours a day.

However, there is also a protest movement: about six thousand teachers of German universities—out of a total of about 26 thousand—signed an open letter in which they defended education in the classrooms [25]. In this letter, the teachers emphasize that the university is a “meeting place”, and learning in it is a “life phase of the team” during which important friendly relations are established between students, and a social network is built. University education, the letter said, is based on a “critical, shared and trust-based exchange between responsible people”, and it requires a direct conversation between those present. Moreover, the “digital leap” in learning that took place during the coronavirus pandemic threatens students with the loss of these important elements.

Universities around the world, which announced the quarantine of COVID-19 in 2020, have been forced to introduce emergency online learning. Ukraine is no exception.

It should be noted that for Ukraine, distance learning due to the quarantine of COVID-19 has become an emergency online learning. Before 2020, it was used only by 12% of the universities of the country. As of 2019, there were 282 universities, academies, and institutes in Ukraine with 1.3 million students [26]. Therefore, the study for the problems of distance learning in Ukrainian universities is extremely important. The purpose of the paper is to analyze the attitude of students to the quality of distance learning and provide recommendations.

2. Methods

From 28 April to 8 May 2020 at the Oles Honchar Dnipro National University (Dnipro, Ukraine), students were surveyed on the quality of distance learning organized during the quarantine period. The survey was completed strictly at the specified time. Students were asked 16 questions. The questions are organized in accordance with the requirements of an ordinal rating scale (Likert scale) in order to know the opinion and attitude of students to the issue of emergency online learning for the purpose of improvement of the learning process. The Likert scale, consisting of 5 items, can also be presented in text format: “Strongly agree”, “Partially agree”, “Neither agree nor disagree”, “Partially disagree”, “Strongly disagree”. This variant of its presentation is convenient for a respondent to

perceive it, in contrast to the seven-item scale, in which the answer options written down in text format will be incomprehensible to a respondent.

It is a state-owned university subordinated to the Ministry of Education and Science of Ukraine. The Ministry of Education and Science of Ukraine (MESU) was forced to introduce an emergency online learning in all educational institutions within two days in March 2020. No instructions for the implementation of the emergency online learning were provided. Therefore, in early April 2020, the Ministry of Education and Science of Ukraine selected a list of the most highly ranked and largest universities in different regions of Ukraine to develop the recommendations for improving the educational process. Among these universities Oles Honchar Dnipro National University (DNU) was chosen as the largest university in the Dnipropetrovsk region. The Dnipropetrovsk region ranks second in population among the regions of Ukraine. After developing recommendations for improving the university educational process, all selected universities sent their conclusions to the Ministry of Education and Science of Ukraine. As a result, in July 2020, the Ministry of Education and Science of Ukraine issued recommendations on the organization of the educational process in the mode of emergency online learning.

The survey was conducted using the online form in Office 365 (Microsoft), namely, in Excel. The students of the Oles Honchar Dnipro National University (DNU) answered questions voluntarily using their own passwords (each of them had the address of the Office 365 corporate form).

All of the DNU students are adults (18 years old) in accordance with the current legislation of Ukraine. All ethical norms meet the requirements of the Ministry of Education and Science of Ukraine which the DNU is subordinated to.

According to the ethical requirements of the Ministry of Education and Science of Ukraine, anonymous surveys of students should be gender neutral in order to ensure zero tolerance. In accordance with these requirements, no gender issues were raised in the development of the questionnaires.

The algorithm is based on quite realistic assumptions (hypotheses) regarding the sample formed according to the survey.

The first hypothesis lies in the assumption that the bulk of survey data meets the requirement of validity. That is, the majority of respondents understood the essence of the questions asked and took a responsible attitude toward answering the questionnaire questions.

The second hypothesis is that the questions of the questionnaire are joined by some common subject, which inevitably leads to the emergence of some latent relations between the answers. That is, some statistical patterns are inherent in the data, which is due to the internal logic of the questionnaire. Answers to some questions of the questionnaire influence, in a statistical sense, other answers. Logically, the answers to certain questions may be either incompatible or unlikely [27].

The illogical answers of a respondent can also be caused by unintentional action, for example, if the question in the questionnaire is not understood. However, such answers still cannot be considered valid.

Based on these hypotheses, one can try to identify such questionnaires that are poorly consistent with the general patterns inherent in the sample. The survey algorithm is based on the principle of cross-validation. Each observation is tested using a specific criterion. The criterion is based on the assessment of the difference between a separate observation and a set of observations of the remaining sample. After calculating the criterion for one observation, it is returned to the sample, and the next observation is withdrawn from it for testing [28].

The criterion takes into account the latent relations between all pairs of attributes. By ordering the value of the criterion, one can select “suspicious” observations (questionnaires) that fall out of the total series of observations. The selected “suspicious” questionnaires are not automatically discarded, but are subjected to additional meaningful analysis to assess the likelihood of answers to the questionnaire questions in order to find out the reasons for

distinguishing such questionnaires among others. Only after it has been established that such questionnaires cannot be recognized as valid are they discarded [29].

3. Results

(Figure 1). During the survey of students on the quality of distance learning organized during the quarantine period, 1224 students from almost all faculties and centers of DNU took part in it, except for the Educational and Methodological Center of Postgraduate Education and Skills Development (Figure 1). In accordance with the recommendations of the Ministry of Education and Science of Ukraine, the main principles of this survey were voluntary participation and anonymity. Therefore, students took part in it if desired. The students of the Faculty of Ukrainian and Foreign Philology and Study of Art were most active. Due to the fact that it is 46% of DNU students, the general sample is representative.

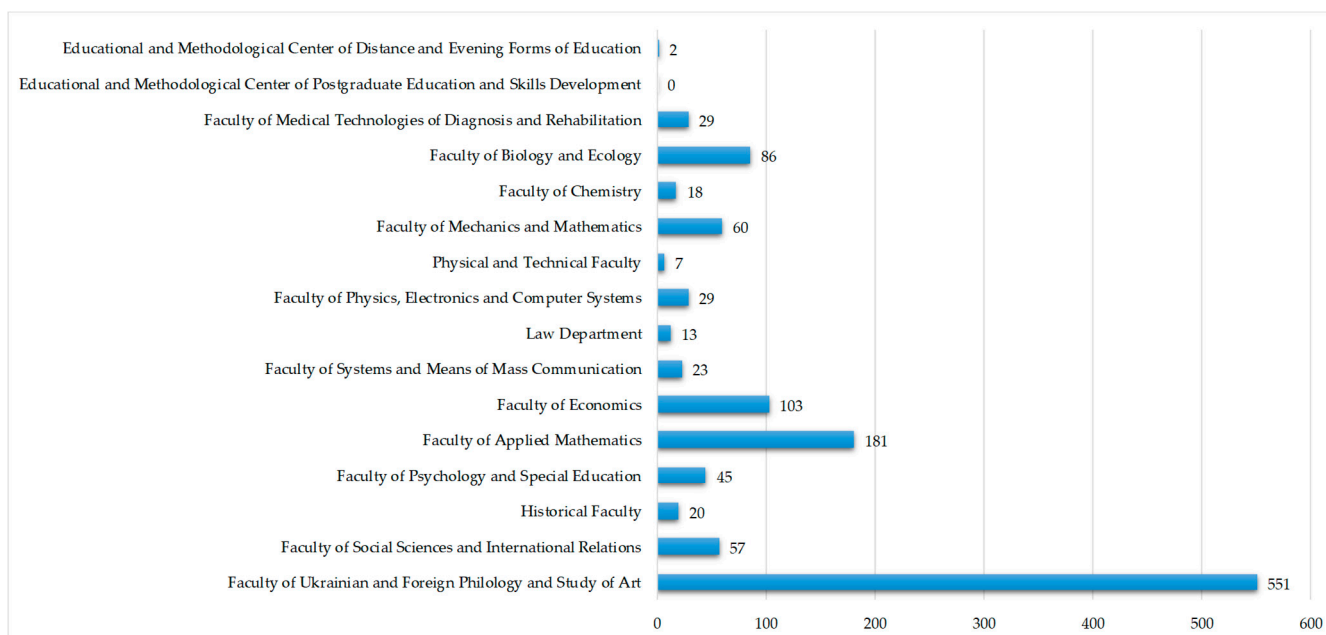


Figure 1. Graphical presentation of the answers of students regarding the quality of distance learning to the question “At which faculty/center do you study?”.

The least active were the students of the Center of Postgraduate Education (0%), the Center of Distance and Evening Forms of Education (0.16%), and the Faculty of Physics and Technology (0.571%). The largest representation was in the Faculty of Ukrainian and Foreign Philology and Study of Art (45.02%).

The second question was “Specify the level of higher education” (Figure 2).

Of the respondents, 92% were studying for a bachelor’s degree, 7% for a master’s degree, and 1% for a PhD. The following questions concern the satisfaction of students with the quality of distance learning. This structure is due primarily to these reasons. Firstly, it is the structure of classroom education and the term of study of Ukrainian universities. Bachelor degree students study for 3 years and 10 months, with 65% of this time being classroom hours (in the mode of emergency online learning, these hours were transferred to the online learning format). Master degree students study for 1 year and 7 months, with 63% of this being classroom hours. PhD degree students study for 3 years and 10 months, with 22% of classroom hours. The PhD degree students write a dissertation at the university for 88% of the study time. That is, in fact, invitations to participate in the online survey in April 2020 were received by students who had classroom hours during the quarantine period: 1–3 year bachelor degree students (4 years students had an undergraduate practice), 1 year master degree students (2-year students graduated in January 2020), 1 year PhD degree students (3–4-year students write a dissertate). Secondly, the number of students by

degree is as follows: 89% of bachelor degree students, 9% of master degree students, and 2% of PhD degree students.

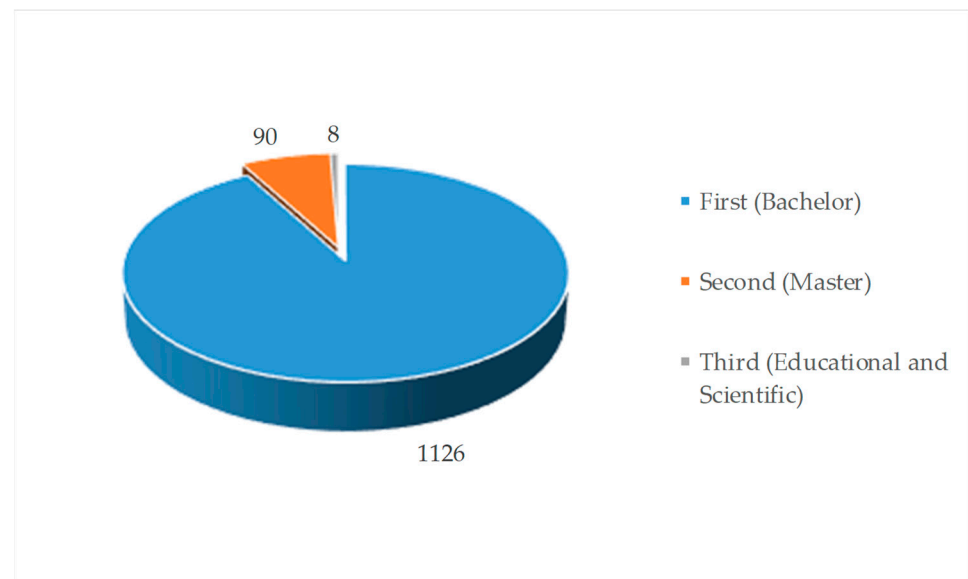


Figure 2. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Specify the level of higher education”.

The third question was “How satisfied are you with the distance learning technologies used in the DNU in the conditions of quarantine?” (Figure 3).

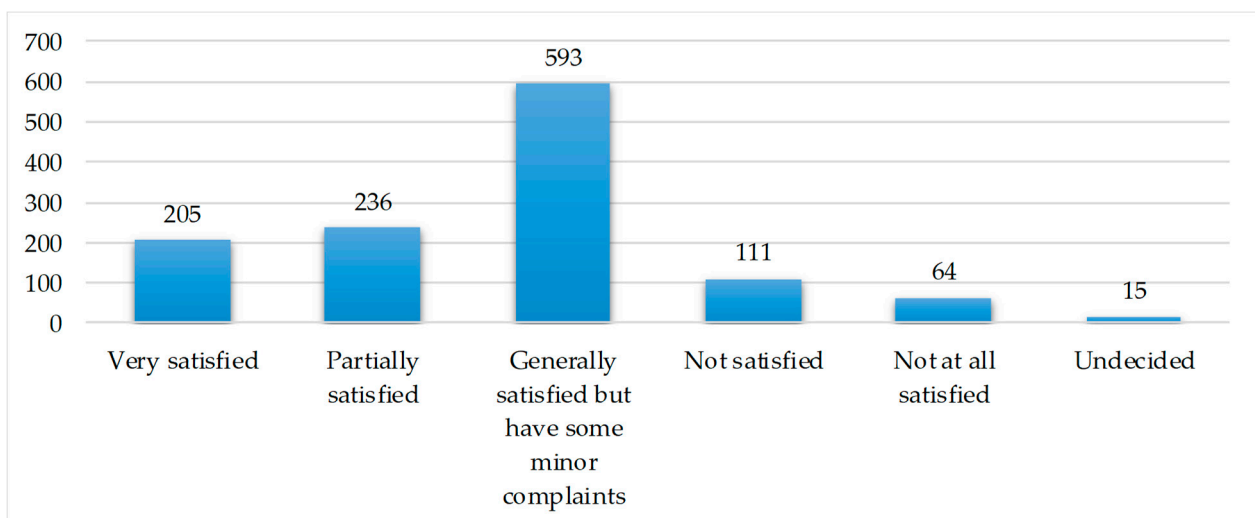


Figure 3. Graphical presentation of the answers of students regarding the quality of distance learning to the question “How satisfied are you with the distance learning technologies used in the DNU in the conditions of quarantine?”.

In total, 36% of respondents answered that they are very satisfied or partially satisfied with the distance learning technologies used in the DNU, 48.5% are satisfied in general, but they have some minor complaints, and 14.3% are dissatisfied.

To understand the quality of the organization of the educational process, the question was asked “Does the DNU ensure compliance with the schedule of classes in the conditions of distance learning?” (Figure 4).

To the question whether the DNU ensures compliance with the schedule of classes in the conditions of distance learning, 89% answered “Yes”, 10% answered “Partially”, and 1% answered “No”.

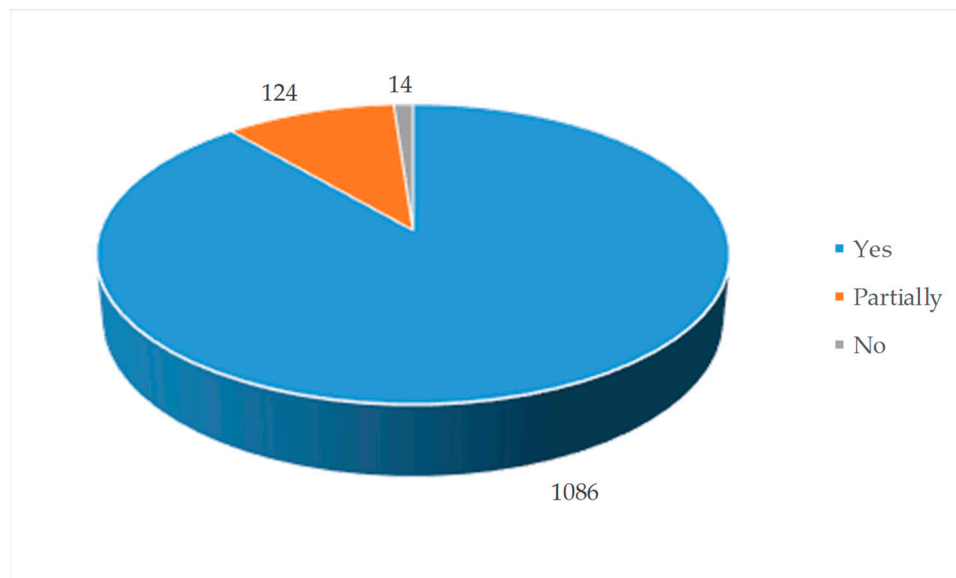


Figure 4. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Does the DNU ensure compliance with the schedule of classes in the conditions of distance learning?”.

To understand the technical barriers, the question was asked “Please indicate what types of devices you use during distance learning? (you can select several answer options)” (Figures 5 and 6).

In total, 50.6% use a PC or laptop, 43% use a smartphone, 5% use a tablet, and 1.4% do not have the technical capacity for distance learning.

It should be noted that the rector’s office recommended the use of Office 365 in distance learning. The main problems faced by the students are as follows: firstly, the absence or instability of Internet connection (40%); secondly, the instability of the Office 365 platform (28%); and 12.8% had no problems, about 10% selecting the options “Lack of technical means for video communications” and “Lack of skills for work with software during distance learning”. In addition, there was conducted a survey on what other educational (communication) platforms are used by teachers during distance learning (Figure 7).

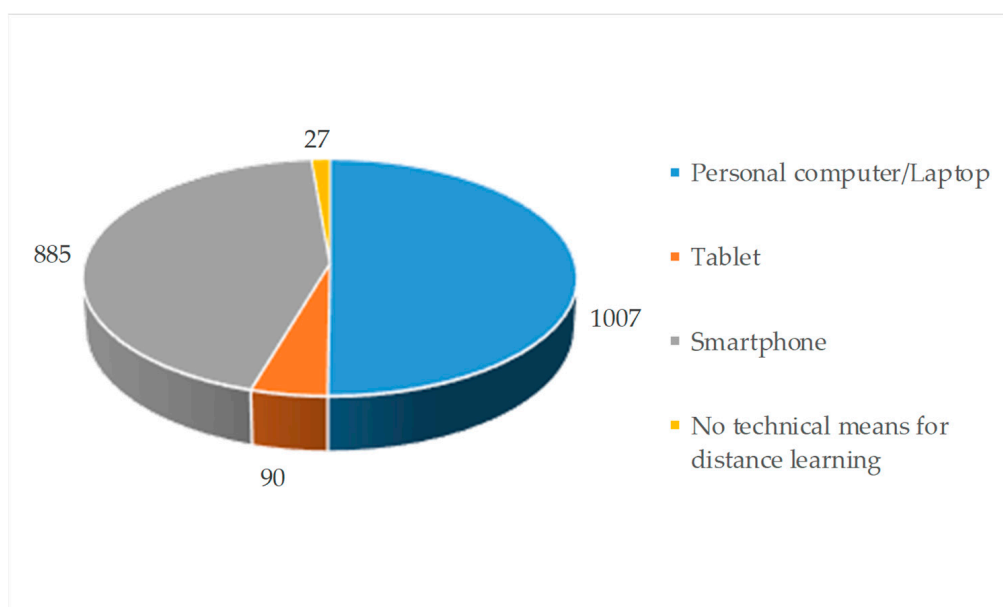


Figure 5. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Please indicate what types of devices you use during distance learning? (you can select several answer options)”.

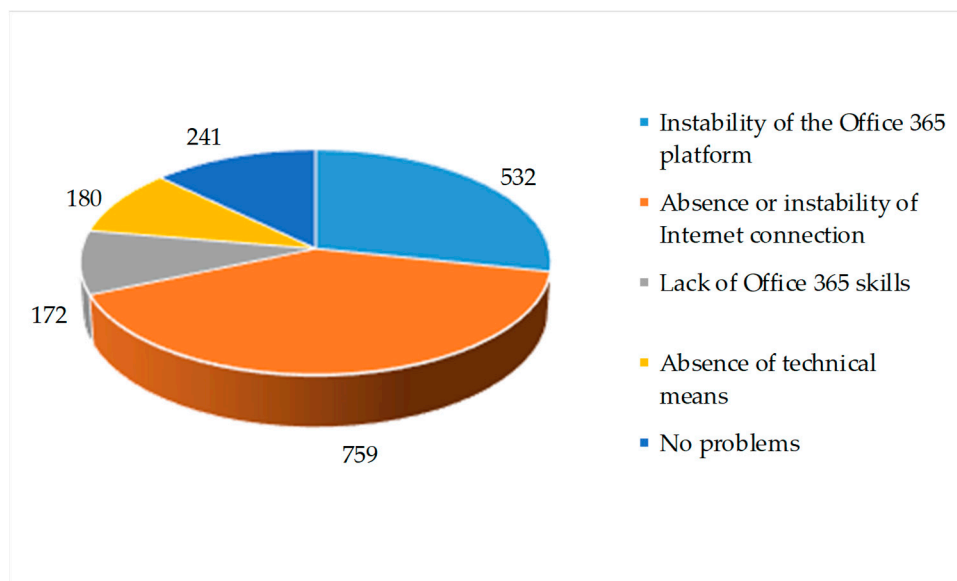


Figure 6. Graphical presentation of the answers of students regarding the quality of distance learning to the question “What technical problems do you face during distance learning? (you can select several answer options)”.

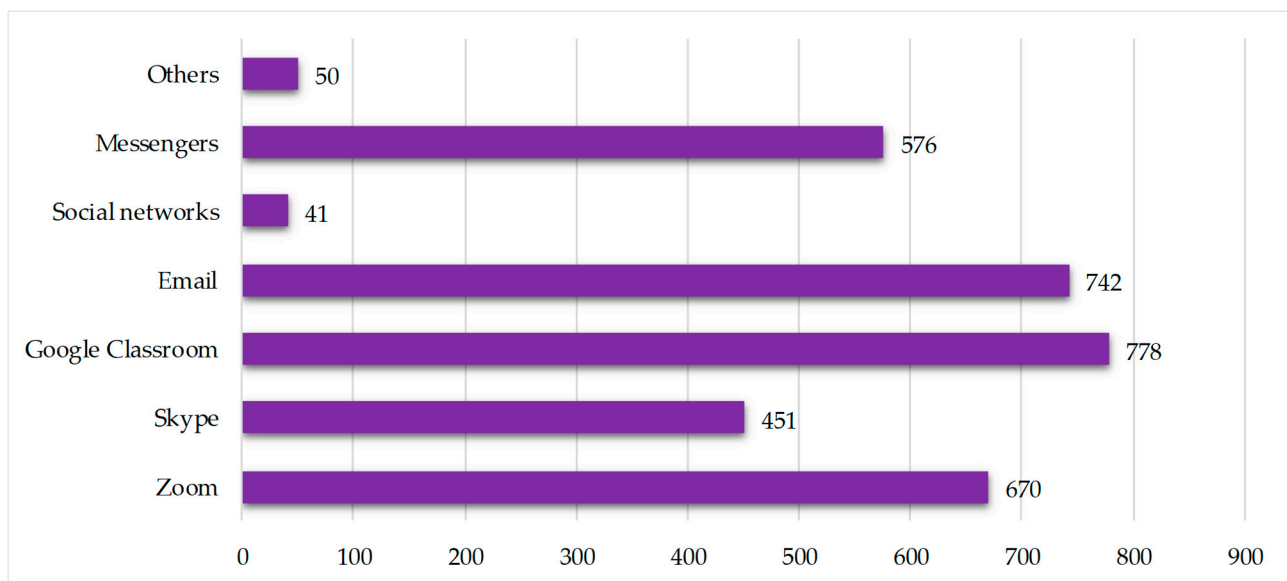


Figure 7. Graphical presentation of the answers of students regarding the quality of distance learning to the question “What technical problems do you face during distance learning? (you can select several answer options)”.

The students indicated the following additional educational (communication) platforms used by teachers during distance learning: Google Classroom—23.5%; Email—22.4%; Zoom—20.3%; Messengers—17.4%; Skype—13.6%. After that, the students answered the questions regarding the effectiveness of the platforms used (Figure 8).

According to the students, the most effective distance learning tools are as follows: virtual learning environments (Office 365, Google Classroom, etc.)—35.3%; video conferencing (Zoom, Skype, etc.)—25.5%; Messengers—20.3%; Email—12.9%; and 6% consider the above distance learning tools ineffective.

It was identified how, in the opinion of students, the distance learning influenced the structure of knowledge assessment (Figure 9) and the structure of assignments (Figure 10).

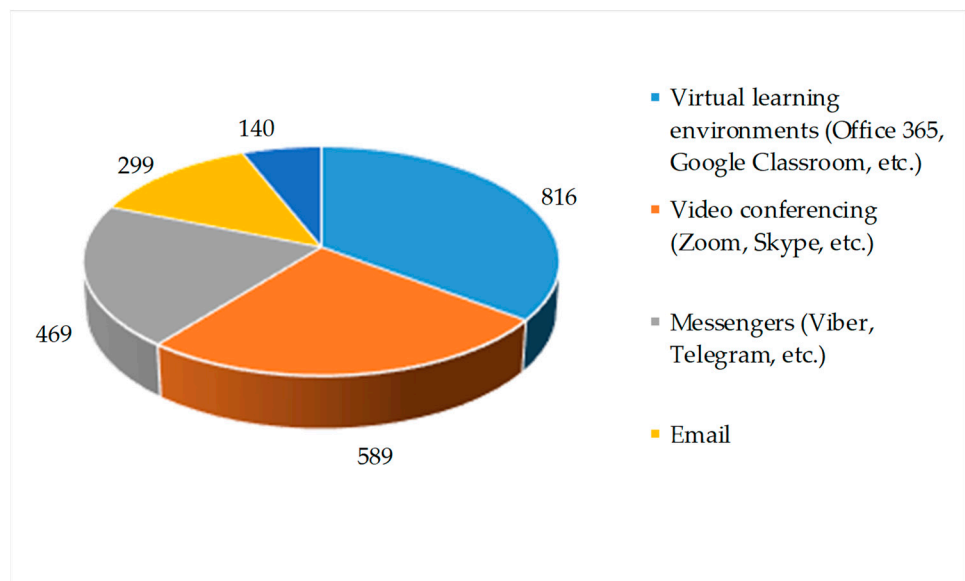


Figure 8. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Which of the distance learning tools do you consider the most effective? (you can select several answer options)”.

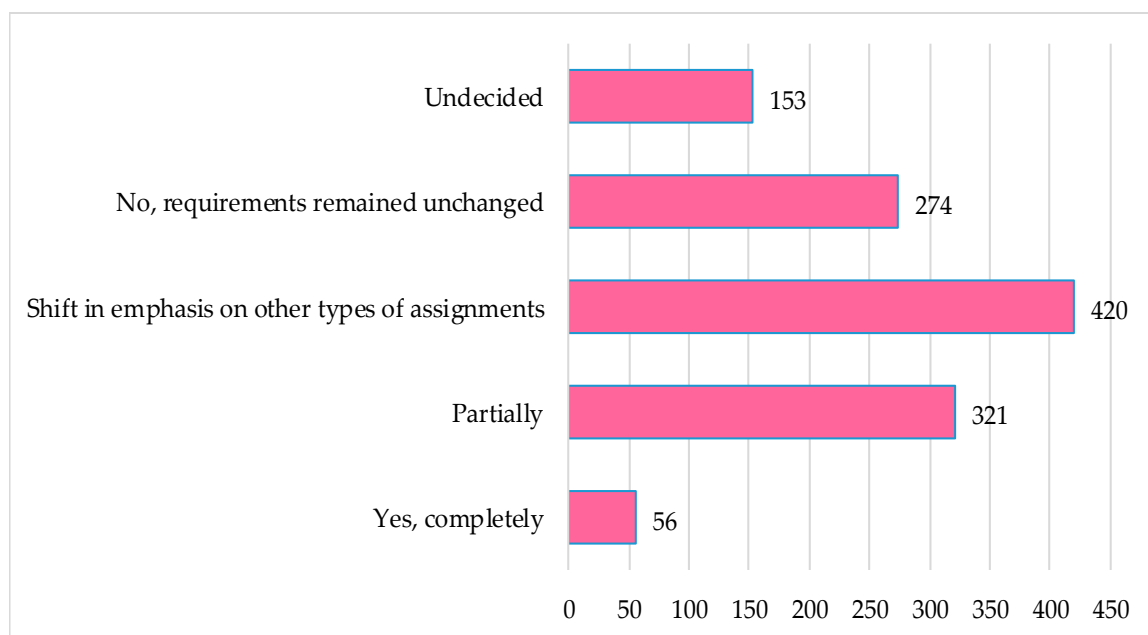


Figure 9. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Was the scoring in the assessment of knowledge changed in relation with the transition to distance learning during the quarantine?”.

The answers to the question of whether the scoring was changed in the assessment of knowledge in relation with the transition to distance learning during the quarantine were as follows: Yes, completely—4.58%; Partially—26.23%; The emphasis was shifted to other types of tasks—34.31%; No, the requirements remained unchanged—22.39%; It is difficult to answer—12.50%.

Among the types of assignments proposed by teachers in distance learning, the most common are online discussions, assessments, and tests. Reports, chat discussions, and essays are also used.

After that, students gave answers regarding the effectiveness of assignments (Figure 11).

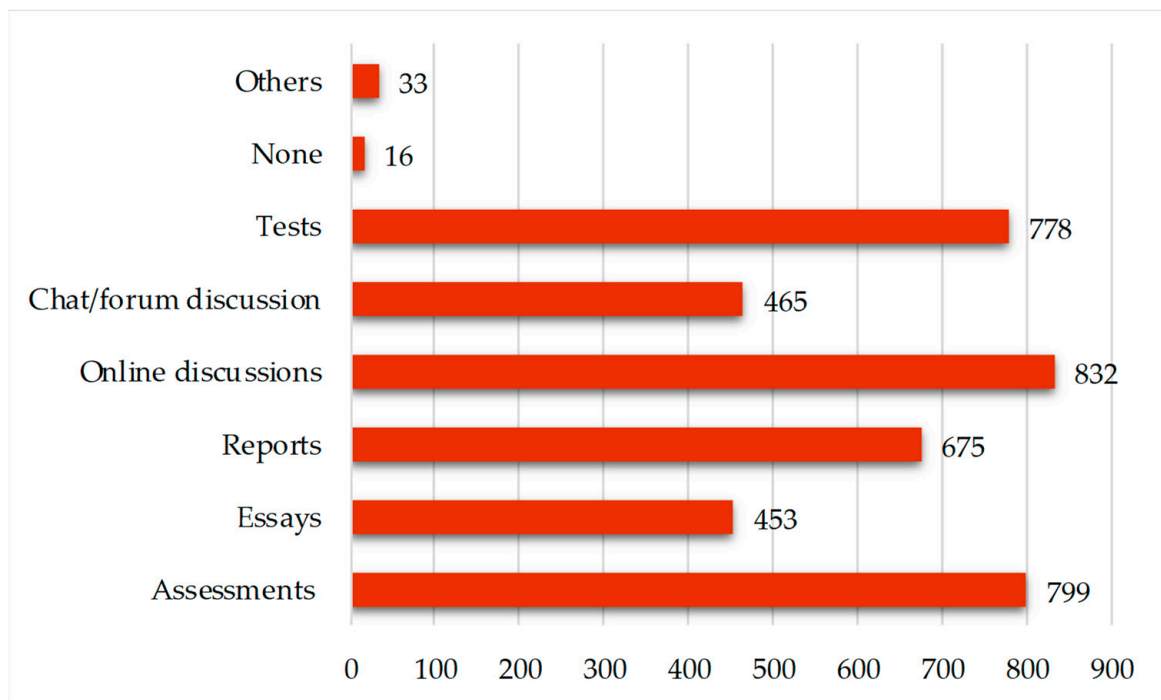


Figure 10. Graphical presentation of the answers of students regarding the quality of distance learning to the question “What types of tasks do teachers propose in distance learning, in addition to studying theoretical materials? (you can select several answer options)”.

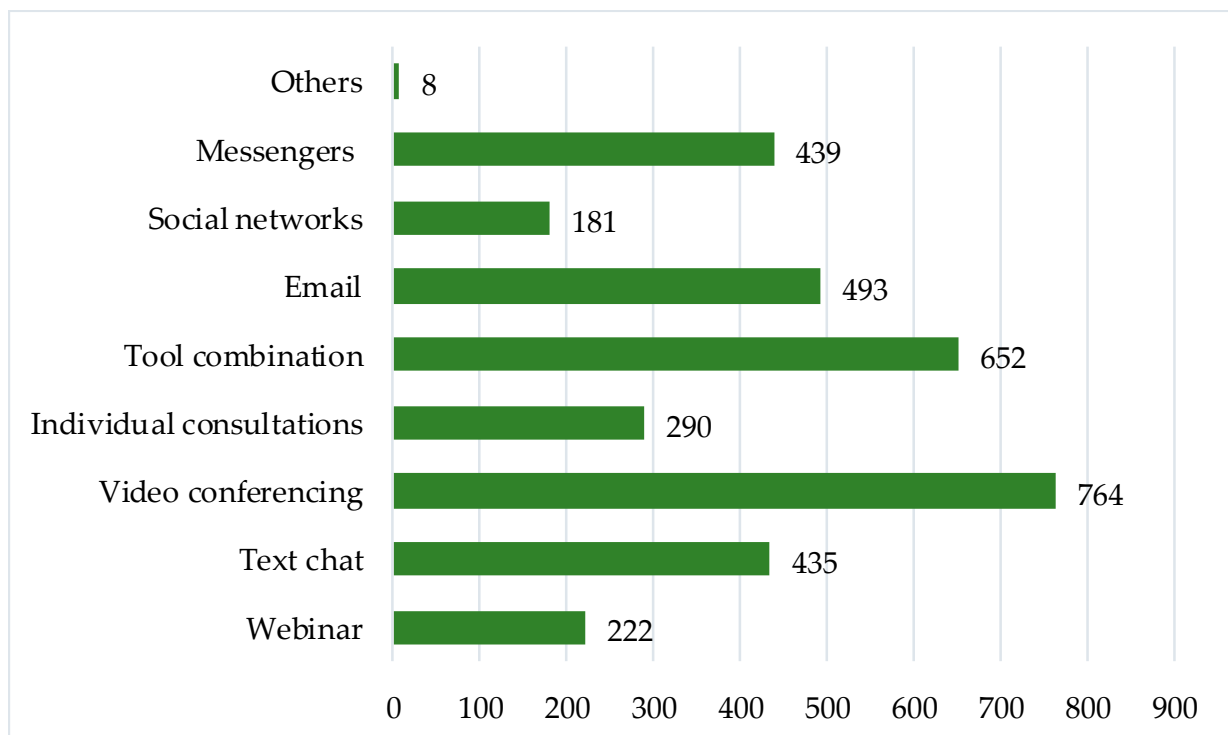


Figure 11. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Please indicate the best ways for you to communicate with the teacher? (you can select several answer options)”.

Students indicated the following most optimal ways of educational communication with the teacher. In first position: video conferencing (Teams, Zoom, Skype)—29.93%; in second position: Tool combination: screen broadcast, group chat and audio conference,

shared documents—18.71%; and the third–fifth positions are occupied by: messengers (12.6%), chats (12.49%), and e-mail communication (14.15%), respectively.

The understanding that the skills acquired by students in the mode of emergency online learning can be applied in the development of distance and blended learning was based on the relevant questions (Figures 12–14).

In total, 91% of respondents believe that the skills of using distance learning technologies will be useful in their further professional activities.

Furthermore, 67% of students would like the elements of distance learning to be used in the future, after the quarantine is over, 15% of students have doubts about the appropriateness of their use, and 12% of students are unequivocally against it.

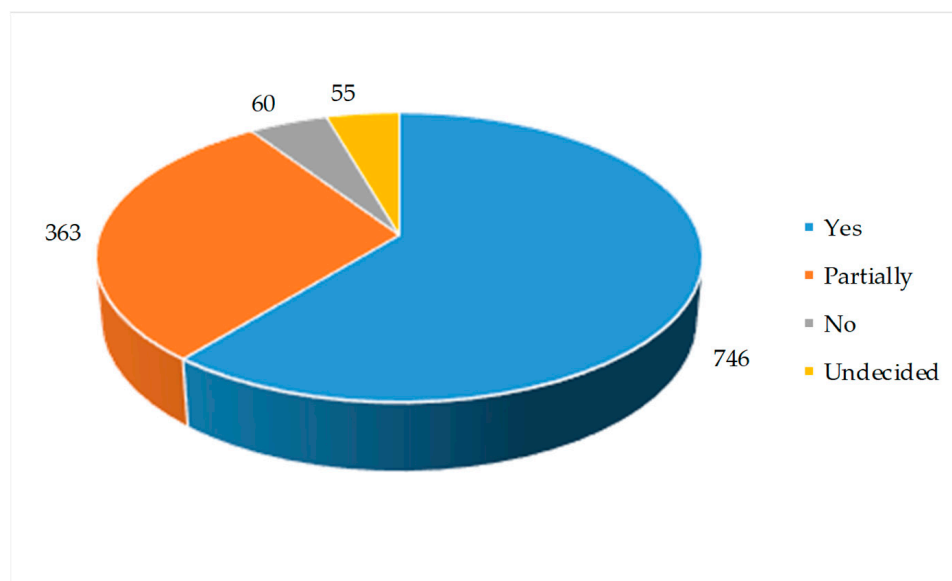


Figure 12. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Do you think you will need the skills to use distance learning technologies in your future professional activities?”.

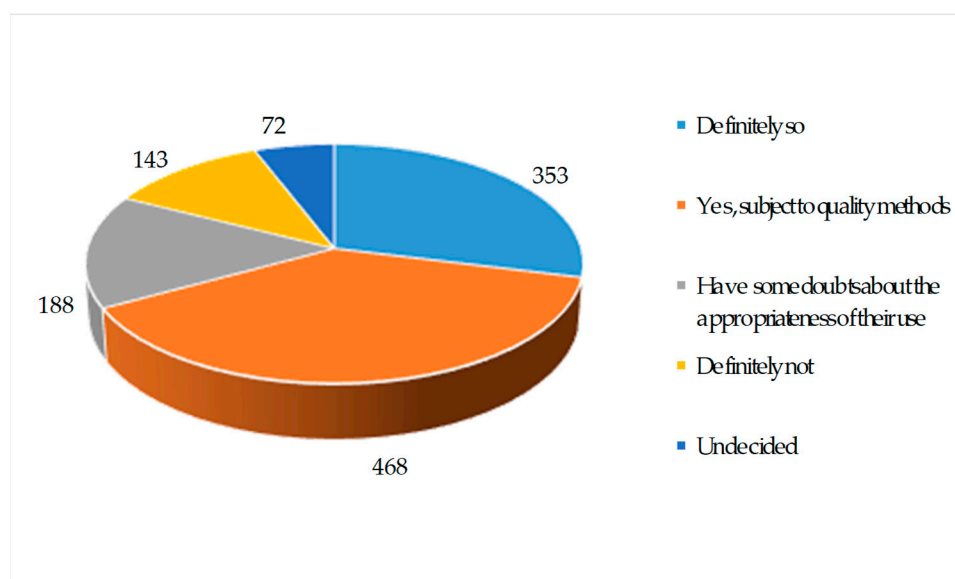


Figure 13. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Would you like the elements of distance learning to be used in the future, after the quarantine is over?”.

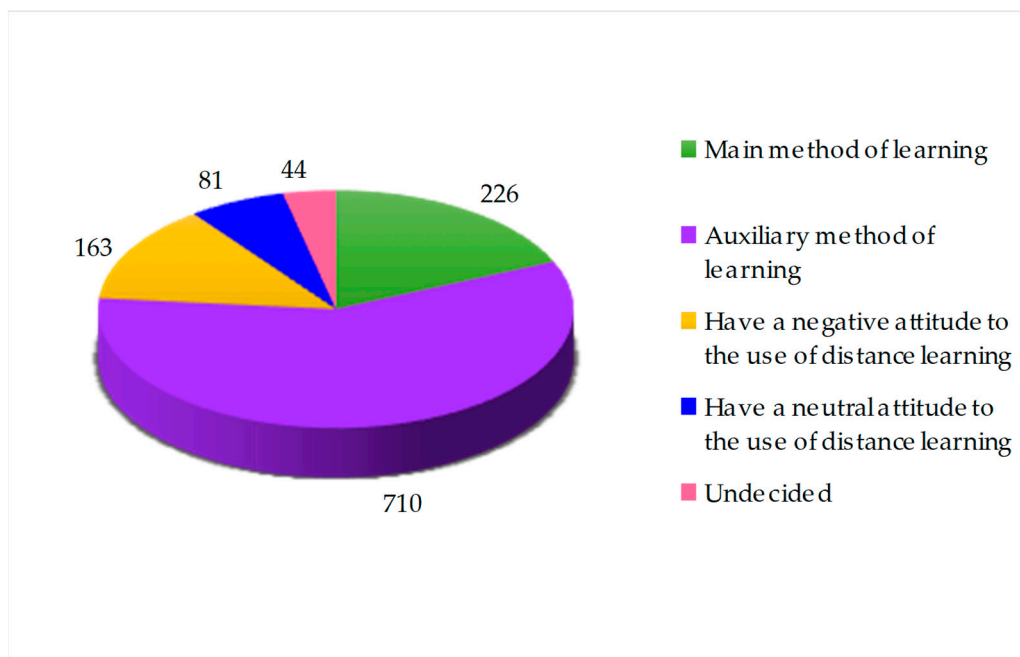


Figure 14. Graphical presentation of the answers of students regarding the quality of distance learning to the question “What place, in your opinion, should the elements of distance learning occupy in the educational process?”.

Moreover, 58% of respondents see elements of distance learning as an auxiliary method of learning, and 18% see it as the main one.

To make general conclusions about the main advantages and disadvantages of distance learning, the corresponding questions were asked (Figures 15 and 16).

According to the students, the most important opportunities of distance (digital) learning are as follows: opportunity to study in a convenient place, in a comfortable and familiar environment—28.57%; opportunity to combine work with study—16.97%; development of self-control skills, motivation to self-education—16.43%; technical level of the learning process (use of information technologies)—13.83%.

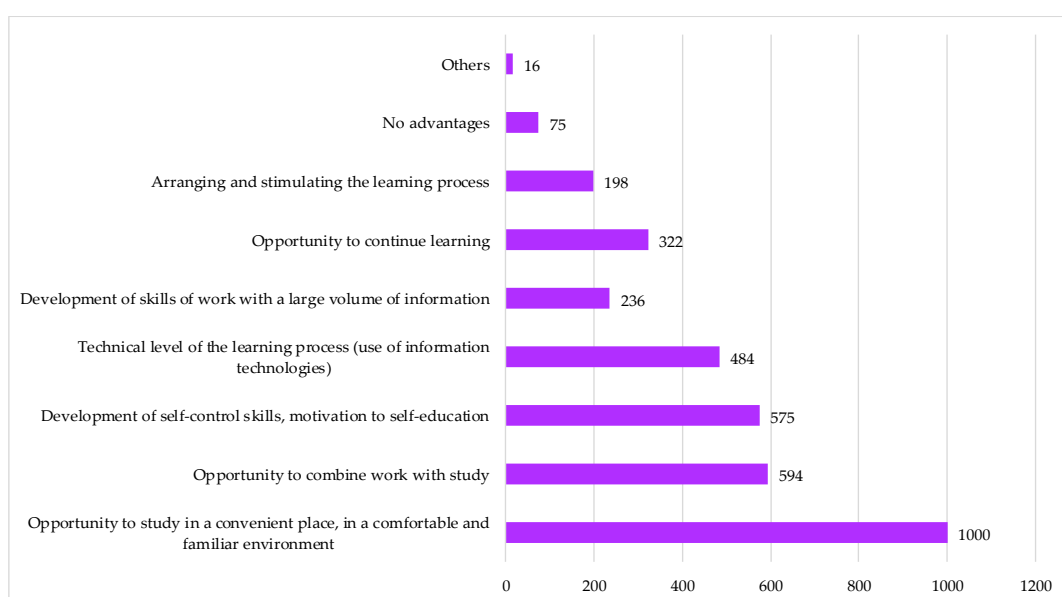


Figure 15. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Which distance (digital) learning opportunities do you consider the most important? (you can select several answer options)”.

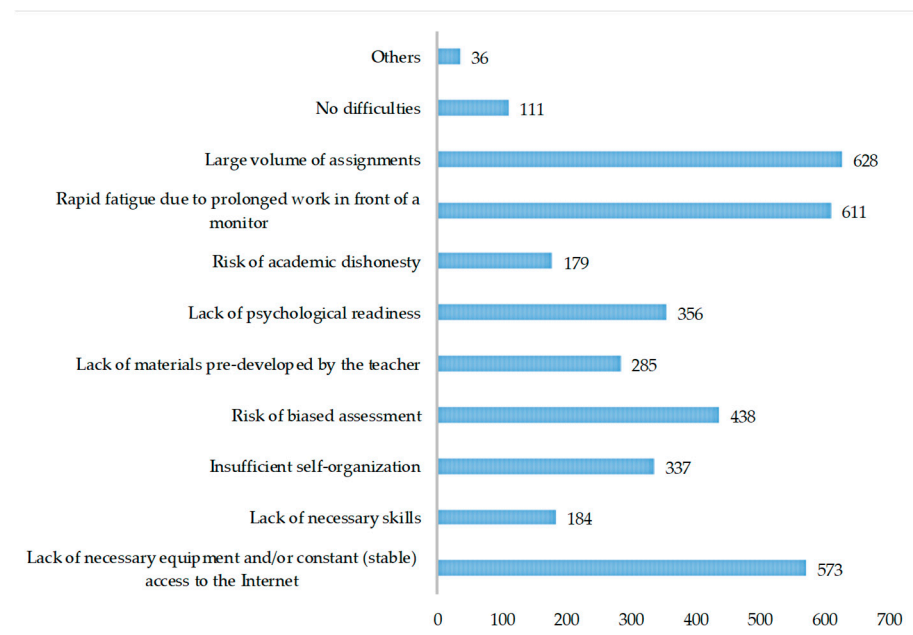


Figure 16. Graphical presentation of the answers of students regarding the quality of distance learning to the question “Indicate the circumstances that negatively affect the organization of full-scale distance learning (you can select several answer options)”.

The aspects that negatively affect the organization of full-scale distance learning are as follows: the large volume of assignments—16.80%; rapid fatigue due to prolonged work in front of a computer—16.35%; absence of necessary equipment and/or constant (stable) access to the Internet—15.33%.

It can be concluded that, according to students, there are three main barriers that negatively affect the organization of full-scale distance learning: organizational, psychological, and technological. Among the organizational barriers, students put a large amount of tasks in the first place: among psychological ones—rapid fatigue due to prolonged work in front of a screen; among technological ones—the lack of necessary equipment and/or constant (stable) Internet access.

As for “large volume of assignments”, a clear structuring of training courses is needed. For example, at the beginning, it is important to explain to students the “rules of the game”, in particular, that the learning process is starting now, and it is necessary to get scores, write tests, “attend lectures” now and not “after quarantine”. Then, the form of the educational process (full-time or distance learning) is less important than its goal—the acquisition of knowledge, skills, abilities. The use of various tools for online classes really facilitates the perception of the material for students, and for teachers, it gives the opportunity to hear and see the feedback and the result of their online work.

Rapid fatigue due to prolonged work in front of a monitor. The main factors that negatively affect eyesight while working in front of a monitor include: screen flicker, low character sharpness, glare and distortion, problems with the optimal ratio of brightness and contrast, etc. All this creates serious problems for the eyes and brain, provoking discomfort and impairment of eyesight of 60–85% of users [29].

The lack of necessary equipment and/or constant (stable) access to the Internet. According to a study by VoxUkraine, more than 15% of Ukrainian families with minor children had no modern devices, and about a third of them did not have an Internet connection in 2018 [30]. According to a survey of parents conducted by the Service of the Education Ombudsman of Ukraine in 2020, the situation is currently almost the same: 12% of families surveyed do not have enough computer equipment to provide online learning [31]. According to the Ministry of Digital Transformation of Ukraine, at the beginning of autumn 2020, 17 thousand localities did not have access to high-speed Internet [32]. The worst

situation is in the villages of the Chernihiv region (70% of the population do not have access to high-speed Internet there). The Zhytomyr, Khmelnytsky, Mykolaiv, Kharkiv, and Vinnytsya regions are also trailing far behind. This means that approximately 5.75 million Ukrainians do not have quality Internet or cannot afford it [33].

So, despite daily improvements in online education and a significant number of digital tools, in families where children do not have access to devices or the Internet, teachers often prefer a telephone or Viber to give assignments or receive oral answers from students. In the case of written works, especially in rural areas, parents bring exercise books of their children or their printouts for inspection. After checking, the exercise books are returned in the same way.

According to DNU reporting for the 2019/2020 academic year, the first semester (September–December 2019), which took place under normal conditions, proved to be more academically successful for students than the second semester (February–June 2020), when from March to June 2020, learning took place in the context of the COVID-19 pandemic. When comparing academic performance over the last 5 years before the COVID-19 pandemic, academic performance deteriorated by an average of 18% at DNU. This is especially true of technical faculties where up to 80% of learning takes place in the form of laboratory work.

According to the decision of the Academic Council of DNU made in September 2020, in order to improve the methodical support of educational disciplines and improve the skills of scientific and pedagogical staff of the university, the University Reload Program was developed. According to it, during the 2020/2021 academic year, when learning took place until May 2021 (the last month of the academic year before the annual assessment session) in the context of the COVID-19 pandemic, appropriate measures were taken.

Advanced training of scientific and pedagogical staff of the university. For example, to improve the Office 365 skills of teachers, the university management asked the staff of the Faculty of Applied Mathematics to develop a new program—“Modern information technologies in the educational process of higher education”.

In the academic year 2020/2021, the Educational and Methodological Center of Postgraduate Education and Skills Development of the Oles Honchar Dnipro National University carried out advanced training of teachers according to the European Credit Transfer and Accumulation System (ECTS). Apart from traditional forms of advanced training, a new program was proposed—“Modern information technologies in the educational process of higher education.” The program included 20 h of joint work (including remote work) and 40 h of independent work (only 60 h, which equates to two ECTS credits) of its participants and the examination. Within the program, 14 training groups were created. In general, under the program “Modern information technologies in the educational process of higher education”, more than 200 university teachers have improved their skills. Participants improved their MS Office 365 skills. The disciplines included such relevant subjects as: modern information technologies for the organization of cooperation in blended learning; using Microsoft Teams (Microsoft Corporation, Redmond, WA, USA) to create an interactive online learning environment; navigation in Microsoft Teams; application of Microsoft Teams tools to control the knowledge of students; organization of feedback using MS Forms; specifics of the organization and carrying out of control measures; main features of Word, Excel, PowerPoint, OneDrive and Outlook, Publisher, Sway, Access, etc.

Improving the methodical support of educational disciplines. The case-study method was applied—an interactive learning method. For example, students of the Faculty of Applied Mathematics of DNU solved a number of practical tasks to automate the procedure for selection of disciplines by students in their term papers. At the end of the 2019/2020 academic year, DNU introduced a modern approach for students to build their own educational trajectory. Namely, students could select disciplines from the university and faculty catalogs. This approach provides ample opportunities for students and is fully in line with international best practices but causes significant technical difficulties. The latter includes checking whether the discipline is selected, the formation of batches of students,

planning the workload of teachers, making schedules, and many others. There are no ready-made algorithms and software solutions to solve these problems, which would allow for the automation of these processes.

4. Discussion

Now it is important to clearly record and assess what the quarantine has brought us and how it will influence the future of higher education.

Digital skills: Due to the shock created by the coronavirus, all participants in the educational process were forced to start using modern technologies, regardless of whether they wanted it or not. This direct practical experience allowed them to master these skills quite well. In fact, technology has long been an integral part of our lives, so educators need to be able to use this handy tool, regardless of the form of learning.

Teaching methods: Unfortunately, in many Ukrainian universities, teachers still force students to write reference papers by hand or rewrite textbook material and then evaluate it. This “writing” is practiced both during internal study mode and during quarantine. However, are such teaching approaches effective? Of course not. For example, an experiment [4] proved that of the four types of work with text, mechanical duplication of information is the least effective method for memorizing information for extended periods of time. These types of work are referred to: (1) text reading + summarizing and writing it down after reading; (2) text reading + summarizing and writing it down while reading; (3) text reading + mechanical verbatim rewriting of the main ideas; (4) text reading without any notes.

Mechanical text copying does not help students to critically interpret what they read [34]. Online teaching will not be more effective than offline teaching until teachers start using effective teaching methods—those that have a scientific basis. This is critical to ensuring a high quality of education. Teachers need to improve their teaching skills, universities need to support them, and students need to increase demand for this.

Academic load and teachers: For conscientious teachers who really tried to maintain the quality of the educational process during the quarantine, preparation for online classes took much longer than before. At the same time, there were those who translated communication with students into a written format, giving them many written assignments and actually refusing to conduct classes. Moreover, there were those who could barely communicate with students at all. At the same time, the degree of involvement of teachers in distance learning does not affect their salaries. This situation once again raised the issue of a fair level of salaries in higher education institutions of Ukraine. Today, Ukrainian universities are tied to the salary schedule and cannot set salaries depending on the results of teachers’ work. Quarantine only reminded once again that universities should have more autonomy in determining the level of salaries.

Academic integrity: Academic integrity is another problem highlighted by the coronavirus. According to a Ukrainian study of 2015 on the academic culture of Ukrainian students, more than 90% of students use plagiarism in the learning [35]. They cheat on exams, print ready-made written works from the Internet, buy them, falsify or invent data, etc. Despite the fact that in 2017 the concept of academic integrity finally appeared in Ukrainian legislation, and universities were obliged to create a system to ensure it, this issue is still not given enough attention. An exam session is now in full swing, which students must take online. One can only imagine the scale of falsifications and copying which will be produced by students not used to writing papers independently and honestly.

Another problem is that many teachers do not know assessment methods that would make it impossible for students to behave dishonestly. Therefore, universities should work systematically to create an effective system that would help ensure academic integrity and develop the corresponding culture among students. If these processes had taken place earlier, this problem would not have become so acute now.

Autonomy of higher education institutions (HEI). Instead of taking control of the situation and adjusting the educational process to quarantine, universities continued to wait

for instructions from the Ministry of Education and Science of Ukraine (MES). MES, in its turn, prepared some incomprehensible recommendations for universities, but at the same time stressed that all the responsibility lies with the universities. Undoubtedly, this period was not easy for everyone, but crises such as the pandemic have their advantages. They will increasingly expand the understanding of their autonomy by educational institutions and help them gain the necessary practical experience, which will only contribute to their independence in the future.

Gender equality: The majority of scientific-pedagogical and pedagogical workers of the Ukrainian HEI are women. When the schools and kindergartens were closed for quarantine, many teachers suffered the same fate as the rest of Ukrainian women—working from home, raising children, and organizing home life. In Ukraine, most of this work is still performed mainly by women. Although over the past five years the number of those who believe that women should take care of the household and raise children has decreased, 83% of the population still believe that the most important task of a woman is to take care of home and family, and that of a man is to earn money (75%) [36]. The issue of gender equality is still acute in our society, and universities are no exception. The glass ceiling of universities still limits the career opportunities of women. For example, in the city of Dnipro (Ukraine), which is the center of the Dnieper agglomeration with a population of almost 1.5 million people, there are 38 higher education institutions, and there is not a single woman among the rectors. Quarantine has only once again proved the importance of paying attention to this issue.

5. Conclusions

Analysis of scientific studies of various aspects of distance education proves the multifacetedness and ambiguity of this pedagogical phenomenon, which conceptual framework has not yet been fully standardized. The rapid development of computer equipment and technologies stimulates the emergence of new types of distance learning, new forms and methods of distance education.

Summing up the review of the basic definitions of distance education, we note the following:

1. Among all the analyzed concepts, distance education is a basic one, and it is much broader than the concept of distance learning, which is the result or the ultimate goal of education. However, the possibility of using these concepts as synonymous ones is not excluded.
2. The essence of modern distance learning in a higher education institution is most accurately revealed by the category of e-distance learning, which is provided by the use of Internet resources, multimedia teaching aids, and other electronic educational resources.
3. The development of distance education is largely related to the introduction of blended (hybrid) learning, as well as its organic integration into the system of open education.

According to the experience of Ukrainian universities, the advantages of distance learning during quarantine are as follows: opportunity to use a large number of resources and sources for learning; constant access to materials; opportunity to study in comfortable conditions and at a convenient time; saving travel time and fees; greater interest and involvement of parents in learning; opportunities to organize creative tasks.

The disadvantages of distance learning during quarantine are as follows: access to digital resources and the availability of quality Internet increase educational social inequality; this education is designed for independent children; heavy vision load; moral burden of teachers when there is no constant visual contact with students; teachers need to attract new educational materials such as presentations, video materials, etc.; lack of socialization.

The coronavirus has indeed raised many important issues in higher education. However, in order to turn problems into opportunities, universities already need to closely monitor how effectively they implement distance learning (including receiving quality

feedback from both teachers and students). They should record and analyze both shortcomings and good practices, share experiences with other universities, use the summer months to establish distance learning processes. As now distance learning is due to circumstances, although in reality it increases the availability of education, and mixed learning—a combination of distance and internal forms of study—may well become our future. However, for the purpose already today we must actively work on the lessons learned and ensure the quality of such education.

Based on the author's study, measures are proposed to improve the educational process at the university. This theoretically served as the scientific basis for the DNU Reload Program. According to the results of the 2020/2021 academic year, it is planned to conduct a questionnaire survey of students after the measures taken and to take into account the shortcomings of this study, and especially to increase the motivation to the survey and introduce more publicity.

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References

1. United Nations Educational, Scientific and Cultural Organization. UNESCO Rallies International Organizations, Civil Society and Private Sector Partners in a Broad Coalition to Ensure #LearningNeverStops. 2020. Available online: <https://en.unesco.org/news/unesco-rallies-international-organizations-civil-society-and-private-sector-partners-broad> (accessed on 5 June 2021).
2. Datsenko, L.; Mikhno, O.; Molochko, M. Education in Geomatics for First Line Emergency Management in Ukraine. *Inf. Secur. Int. J.* **2018**, *40*, 205–211. [[CrossRef](#)]
3. Kruglyk, V.; Bukreiev, D.; Chorny, P.; Kupchak, E.; Sender, A. Discord platform as an online learning environment for emergencies. *Ukr. J. Educ. Stud. Inf. Technol.* **2020**, *8*, 13–28. [[CrossRef](#)]
4. Karataş, T.; Tuncer, H. Sustaining Language Skills Development of Pre-Service EFL Teachers despite the COVID-19 Interruption: A Case of Emergency Distance Education. *Sustainability* **2020**, *12*, 8188. [[CrossRef](#)]
5. Bozkurt, A.; Sharma, R.C. Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian J. Distance Educat.* **2020**, *15*, i–vi.
6. Xie, J.; Rice, M.F. Instructional designers' roles in emergency remote teaching during COVID-19. *Distance Educ.* **2021**, *42*, 70–87. [[CrossRef](#)]
7. Yilmaz Ince, E.; Kabul, A.; Diler, I. Distance education in higher education in the COVID-19 pandemic process: A case of Isparta Applied Sciences University. *Int. J. Technol. Des. Educ. Sci.* **2020**, *4*, 345–351. [[CrossRef](#)]
8. Karakaya, K. Design considerations in emergency remote teaching during the COVID-19 pandemic: A human-centered approach. *Educ. Technol. Res. Dev.* **2021**, *69*, 295–299. [[CrossRef](#)]
9. Talidong, K.J.B. Implementation of Emergency Remote Teaching (ERT) among Philippine Teachers in Xi'an, China. *Asian J. Distance Educ.* **2020**, *15*, 196–201. Available online: <https://eric.ed.gov/?id=EJ1290051> (accessed on 5 July 2021).
10. Duarte, D.M.D.; Bezerra, F.; Maknamara, M. Distance learning in teacher education: Emergency, quality benchmarks, public policies, and the pedagogical practice. *Acta Sci. Educ.* **2016**, *38*, 61. [[CrossRef](#)]
11. Bhowmik, S.; Bhattacharya, M.D. Factors Influencing Online Learning in Higher Education in the Emergency Shifts of Covid 19. *Online J. Distance Educ. e-Learn.* **2021**, *9*, 74–83. Available online: <http://tojedel.net/journals/tojedel/articles/v09i01/v09i01-08.pdf> (accessed on 5 June 2021).
12. Al Lily, A.E.; Ismail, A.F.; Abunasser, F.M.; Alqahtani, R.H.A. Distance education as a response to pandemics: Coronavirus and Arab culture. *Technol. Soc.* **2020**, *63*, 101317. [[CrossRef](#)]
13. Zhou, T.; Huang, S.; Cheng, J.; Xiao, Y. The Distance Teaching Practice of Combined Mode of Massive Open Online Course Micro-Video for Interns in Emergency Department during the COVID-19 Epidemic Period. *Telemed. e-Health* **2020**, *26*, 584–588. [[CrossRef](#)] [[PubMed](#)]

14. Ferri, F.; Grifoni, P.; Guzzo, T. Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. *Societies* **2020**, *10*, 86. [CrossRef]
15. Nurul Mostafa Kamal, Z. Distance Education for Rohingya Children during COVID 19 Emergency: Bangladesh Rohingya Response Perspectives; Challenges, Recommendations and Proximities. *Distance Educ. Rohingya Child. COVID* **2020**, *19*. [CrossRef]
16. Hall, O.P., Jr. Editorial: COVID-19 and the future of management education. *Graziadio Busin. Rev.* **2020**, *23*. Available online: <https://gbr.pepperdine.edu/2020/05/editorial-covid-19-and-the-future-management-education/> (accessed on 5 June 2021).
17. Brammer, S.; Clark, T. COVID-19 and Management Education: Reflections on Challenges, Opportunities, and Potential Futures. *Br. J. Manag.* **2020**, *31*, 453–456. [CrossRef]
18. Berezna, S.; Prokopenko, I. Higher Education Institutions in Ukraine during the Coronavirus, or COVID-19, Outbreak: New Challenges vs. New Opportunities. *Rev. Rom. Pentru Educ. Multidimens.* **2020**, *12*, 130–135. [CrossRef]
19. Lokshyna, O.; Topuzov, O. COVID-19 and education in Ukraine: Responses from the authorities and opinions of educators. *Perspect. Educ.* **2021**, *39*, 207–230. [CrossRef]
20. Loban, G.; Faustova, M.; Ananieva, M.; Kostenko, V. COVID-19: The time for reconsidering and improving on-line learning in the context of medical education in Ukraine. *Fundam. Appl. Res. Pract. Lead. Sci. Sch.* **2020**, *38*, 135–143. Available online: <https://farplss.org/index.php/journal/article/view/701> (accessed on 5 June 2021).
21. Knysh, O.; Dudziak, O. Overcoming the Challenges—The Impact of COVID-19 on Agricultural Higher Education in Ukraine. *Rev. Rom. Pentru Educ. Multidimens.* **2020**, *12*, 162–167. [CrossRef]
22. Lau, J.; Yang, B.; Dasgupta, R. Will the Coronavirus Make Online Education Go Viral? Available online: <https://www.timeshighereducation.com/features/will-coronavirus-make-online-education-go-viral> (accessed on 5 June 2021).
23. Universities UK—Value of University. 2019. Available online: <https://comresglobal.com/polls/universities-uk-value-of-university/> (accessed on 5 June 2021).
24. Children Doing 2S Hours’ Schoolwork a Day on Average. 2020. Available online: <https://www.ucl.ac.uk/ioe/news/2020/jun/children-doing-2S-hours-schoolwork-day-average> (accessed on 5 June 2021).
25. Zawacki-Richter, O. The current state and impact of Covid-19 on digital higher education in Germany. *Hum. Behav. Emerg. Technol.* **2021**, *3*, 218–226. [CrossRef] [PubMed]
26. Are There Really Too Many Universities in Ukraine and What to Do with Them? 2019. Available online: <https://www.ukrinform.ua/rubric-society/2818883-ci-dijsno-v-ukraini-zabagato-universitetiv-i-so-z-nimi-roboti.html> (accessed on 5 June 2021).
27. Hodges, C.; Moore, S.; Lockee, B.; Trust, T.; Bond, A. The difference between emergency remote teaching and online learning. *Educ. Rev.* **2020**, *27*, 1–12. Available online: [http://www.cetla.howard.edu/workshops/docs/The%20Difference%20Between%20Emergency%20Remote%20Teaching%20and%20Online%20Learning%20_%20EDUCAUSE%20\(2\).pdf](http://www.cetla.howard.edu/workshops/docs/The%20Difference%20Between%20Emergency%20Remote%20Teaching%20and%20Online%20Learning%20_%20EDUCAUSE%20(2).pdf) (accessed on 5 June 2021).
28. Durak, G.; Zankaya, S. Emergency Distance Education Process from the Perspectives of Academicians. *Asian J. Distance Educ.* **2020**, *15*, 159–174. Available online: <http://www.asianjde.com/ojs/index.php/AsianJDE/article/view/507> (accessed on 5 June 2021).
29. Toquero, C.M. Emergency remote education experiment amid COVID-19 pandemic. *IJERI Int. J. Educ. Res. Innov.* **2020**, *15*, 162–176. [CrossRef]
30. Alvarez, A.V. The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian J. Distance Educ.* **2020**, *15*, 144–153. Available online: <https://eric.ed.gov/?id=EJ1289949> (accessed on 5 June 2021).
31. Sologub, I.; Sholomytska, O. Ukrainian Households in Crisis Conditions: Who Needs Help the Most? Available online: <https://voxukraine.org/uk/ukrayinski-domogospodarstva-v-umovah-krizi-hto-najbilshe-potrebuye-dopomogi/> (accessed on 5 June 2021).
32. Nenko, Y.; Kybalna, N.; Snisarenko, Y. The COVID-19 Distance Learning: Insight from Ukrainian students. *Rev. Bras. Educ. Campo* **2020**, *5*, 1–19. [CrossRef]
33. Ministry of Digital Transformation of Ukraine. The Results of the First Study in Ukraine on the Availability of Public Access to High-Speed Internet. 2020. Available online: <https://www.ukrinform.ua/rubric-presshall/3072241-rezultati-persogo-v-ukraini-doslidzenna-naavnosti-dostupu-naselenna-do-visokosvidkisknogo-internetu.html> (accessed on 5 June 2021).
34. Alasmari, T. Learning in the COVID-19 Era: Higher Education Students and Faculty’s Experience with Emergency Distance Education. *Int. J. Emerg. Technol. Learn. IJET* **2021**, *16*, 40–62. [CrossRef]
35. Academic Integrity as a Basis for Sustainable Development of the University. 2016. Available online: https://www.univer.kharkov.ua/images/redactor/news/2016-09-07/chesnist_osnova_rozvitk_Univers.pdf (accessed on 5 June 2021).
36. The Role of Women in Ukrainian Society. 2020. Available online: http://ratinggroup.ua/research/ukraine/rol_zhenschin_v_ukrainskom_obschestve.html (accessed on 5 June 2021).