The COVID-19 Distance Learning: Insight from Ukrainian students

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ABSTRACT. Although distance learning has become an essential part of everyday life of most students during quarantine, there is little evidence regarding its effectiveness among Ukrainian students. The objective of the research is to estimate the effectiveness of current distance learning process in Ukrainian higher educational institutions; outline types of distance education provided; highlight the negative and positive aspects of introducing distance learning; describe the perspectives and approaches to solving the problems of distance education in universities. The study sought to collect data on students' attitudes and needs for distance learning during quarantine by means of the on-line survey – Covid-19 Distance Learning Questionnaire, which involved 540 respondents. Prerequisites for the development of distance education in Ukraine are considered. The findings reveal the most used distance learning tools, duration of learning, types of leisure activities, readiness of participants of educational process for distance learning, factors that affect distance learning (skills, internet speed, emotions) etc. The results obtained in the research can be provided to the governmental agencies, educational institutions and other stakeholders to further improve the process of distance learning.

Keywords: Empirical Study, Effectiveness of Distance Education, Distance Learning, Student, Questionnaire, Ukraine, Higher Education Institution.
Educación a distancia y COVID-19: información de estudiantes ucranianos

RESUMEN. Aunque el aprendizaje a distancia se ha convertido en una parte esencial de la vida diaria de la mayoría de los estudiantes durante la cuarentena, hay poca evidencia de su efectividad entre los estudiantes ucranianos. El objetivo de la investigación es estimar la efectividad del proceso actual de aprendizaje a distancia en las instituciones de educación superior de Ucrania; describir los tipos de educación a distancia ofrecidos; destacar los aspectos negativos y positivos de la introducción del aprendizaje a distancia; Describir las perspectivas y enfoques para resolver los problemas de la educación a distancia en las universidades. El estudio buscó recopilar datos sobre las actitudes y necesidades de los estudiantes para el aprendizaje a distancia durante la cuarentena a través de la encuesta en línea: el Cuestionario de aprendizaje a distancia Covid-19, que involucró a 540 participantes. Se consideran requisitos previos para el desarrollo de la educación a distancia en Ucrania. Los resultados revelan las herramientas de aprendizaje a distancia más utilizadas, la duración del aprendizaje, los tipos de actividades de ocio, la preparación de los participantes en el proceso educativo para el aprendizaje a distancia, los factores que afectan el aprendizaje a distancia (habilidades, velocidad de internet, emociones) etc. Los resultados de la encuesta se pueden proporcionar a agencias gubernamentales, instituciones educativas y otras partes interesadas para mejorar aún más el proceso de aprendizaje a distancia.

Palabras clave: Estudio Empírico, Eficacia de la Educación a Distancia, Aprendizaje a Distancia, Estudiante, Cuestionario, Ucrania, Institución de Educación Superior.
Educação à Distância e o COVID-19: informações de estudantes ucranianos

RESUMO. Embora o ensino a distância tenha se tornado uma parte essencial da vida cotidiana da maioria dos estudantes durante a quarentena, há poucas evidências sobre sua eficácia entre os estudantes ucranianos. O objetivo da pesquisa é estimar a eficácia do atual processo de ensino à distância nas instituições de ensino superior ucranianas; delinear tipos de educação a distância oferecidos; destacar os aspectos negativos e positivos da introdução do ensino à distância; descrever as perspectivas e abordagens para resolver os problemas da educação à distância nas universidades. O estudo buscou coletar dados sobre as atitudes e necessidades dos alunos para o ensino a distância durante a quarentena por meio da pesquisa on-line - Covid-19 Distance Learning Questionnaire, que envolveu 540 participantes. São considerados os pré-requisitos para o desenvolvimento da educação à distância na Ucrânia. Os resultados revelam as ferramentas de ensino a distância mais utilizadas, duração do aprendizado, tipos de atividades de lazer, prontidão dos participantes do processo educacional para o ensino à distância, fatores que afetam o ensino a distância (habilidades, velocidade da internet, emoções) etc. Os resultados obtidos na pesquisa podem ser fornecido às agências governamentais, instituições de ensino e outras partes interessadas para melhorar ainda mais o processo de ensino à distância.

Palavras-chave: Estudo Empírico, Eficácia da Educação a Distância, Ensino a Distância, Aluno, Questionário, Ucrânia, Instituição de Ensino Superior.
Introduction

One of the consequences of informatization of the society and the constant decrease in the cost of using the global Internet has been the significant introduction of information technologies into educational processes (Shunevych, 2002). As a result, a new form of educational process has emerged that is quite promising and is focused on individualization - distance learning.

According to Khasson e Waterman (2004), one student’s e-learning is about three times cheaper than traditional education in a country. This can reduce the burden on the state budget on the one hand and on the other - facilitates education of affected social groups of population and persons with disabilities. In the context of the global financial crisis, reducing costs and increasing the effectiveness of training become one of the most important tasks of educational institutions (Shtykhno, 2016). Therefore, the issue of implementation of distance education in the system of higher education becomes especially relevant today.

The Law of Ukraine “On Higher Education” defines “competitive human capital for the high-tech and innovative development of the country, self-realization of the individual, meeting the needs of society, labor market and the state in qualified specialists” as the main priority of the state. Among the basic principles of public policy in the field of higher education, the Law defines: promoting the sustainable development of society by preparing competitive human capital and creating conditions for lifelong learning; accessibility of higher education; international integration and integration of the higher education system of Ukraine into the European Higher Education Area (World experience of distance education development in domestic context).

Implementation of these priorities requires significant modernization of the national education system. The policy of modernization of educational systems of developed countries is increasingly focused on the development of distance education. Over the last decade the Ukrainian education system has been paying great attention to the need to integrate information and communication technologies into all learning processes: appropriate strategies are announced, educational institutions are being computerized, teachers and students are being introduced to new equipment and digital technologies, and methods of distance learning, etc.

The problem of distance learning has been given much attention in the scientific literature. Distance learning is the focus of

A lot of researchers invest in discussing the advantages of distance learning: accessibility; ability to learn at one’s own pace (Bijeesh); smooth schedule; convenience of time and space; significant cost savings, etc.

Despite these positive aspects relating distance learning, it has many disadvantages: isolation; limited social interaction; necessity to use complicated technology; high chances of distraction and losing track of deadlines (Bijeesh); inability of wise utilization of multimedia; absence of communal feeling; less motivational; absence of social interactions; no immediate feedback; need for reliable access to the Internet and technology, good time management skills and self-motivation, etc.

It is obvious that students and faculty may benefit from distance education (Shanker & Hu, 2008), nonetheless, we must realize that distance education might not be the best choice for every student. Understanding its advantages and drawbacks can help the educational institutions improve the process of distance learning since no other option is possible due to quarantine.


However, in practice, the real problem of distance learning has arisen both in Ukraine only in the recent period when quarantine measures were introduced due to the spread of COVID-19. Following the announcement by the government and relevant governmental institutions of compulsory distance learning, teachers are faced with real challenges in implementing
this form of learning, which needs urgent consideration and resolution. The fact explains the actuality of conducting this survey.

The Resolution of the Cabinet of Ministers of Ukraine №215 of March 11, 2020, quarantine was introduced throughout Ukraine. Instead, the Ministry of Education and Science of Ukraine issues Order № 406 which obliges the heads of educational institutions to develop a plan of distance learning, which has become a real quest for teachers and students.

To assess effectiveness of the distance learning process the university management can imply the following criteria:

- the degree of absorption of knowledge,
- the ability to apply the accumulated knowledge in practice,
- time for individual learning process,
- accessibility (students living in a large city, town or village have the opportunity to study remotely),
- democratic communication between teacher and student,
- leading educational technologies, etc.

To reflect the problems related to the use of distance learning technologies, to develop options for solving such problematic issues, as well as to identify the main trends in the further development of the processes of use of distance learning technologies the COVID-19 Distance Learning Questionnaire was implied. Moreover, it was of vital importance to get feedback from students in order to understand what is currently happening in education, to find out about problems encountered during their distance learning.

**Time and location.** In the time period from 01 to 10 April 2020, a group of Ukrainian educators-researchers conducted an online survey on the features of distance learning during the quarantine caused by the spread of COVID-19 in the world and Ukraine.

**Means of the survey.** The COVID-19 Distance Learning Questionnaire was distributed through the following channels: Google Classroom; Google Forms; e-mailing to respondents. The survey was conducted online and was based on the principles of anonymity and confidentiality. In line with aforementioned, it should be noted that respondents were already knowledgeable about digital technology and answered the questionnaire based on their own experience. Outside the survey were those students who did not have access to the Internet, were not provided with digital communication tools, were not able to use...
the tools, and who for various reasons were unable or unwilling to provide their answers.

Participants. Students from three major higher educational institutions of Cherkasy, Ukraine, took part in the survey: Cherkasy Institute of Fire Safety, Cherkasy Medical Academy, Bohdan Khmelnitsky National Pedagogical University. Number of respondents – 540 persons. The survey was anonymous. No special selection of the students for the questionnaire survey has been done.

Aim of research. The objectives of the online survey are to collect data on students’ attitudes and needs for distance learning; identify problems and provide the data to stakeholders to further improve the process of distance learning. Analytical questionnaire will help to better understand how distance learning methods are being implemented, which need to be modified or improved, which is also a priority of institutional development.

Actuality. An online student survey was conducted due the need to respond promptly to the situation in the country associated with the introduction of quarantine because of the spread of COVID-19. The following regulatory acts were taken into account:

- Resolution of the Cabinet of Ministers of Ukraine “On Prevention of Coronavirus COVID-19 Dissemination in the Territory of Ukraine” №211 (2020, March 11);

The survey was conducted in accordance with general scientific approaches, in particular: novelty and relevance; practical usefulness, possibility of implementation of the given recommendations and conclusions; availability of previous experience and expertise of researchers in carrying out scientific research.

The results of the COVID-19 Distance Learning Questionnaire were processed using the SPSS computer software package for Windows (version 17.0); factor analysis, comparative and correlation analysis and graphical comparison of the empirical data obtained have been conducted.
Research results

General information about participants


![Distribution of respondents by the year of study.](image)

Source: author’s calculations based on the conducted survey.

Organization of distance learning in practice

Although it is widely believed that the introduction of information and communication technologies and the use of digital media in Ukrainian higher education is not very effective, 59.9% of students are completely satisfied with their distance education in quarantine.

![Self-assessment of student satisfaction of distance education.](image)

Source: author’s calculations based on the conducted survey.
During the survey, it was important to determine how teachers organize distance learning, what tools teachers use; how much time respondents use to prepare for learning activities and how much time they spend on their actual distance learning.

Respondents were asked: what distance learning tools does your educational institution use to provide distance learning during quarantine? It was suggested to select one or more answers. Most often, educational institutions offer and use the following distance learning tools:

**Figure 3 - Distance learning tools.**

Source: author’s calculations based on the conducted survey.

First and foremost, the responses revealed that teachers were not sufficiently aware of the variety of modern online learning tools, most of them choosing only one or two options, indicating the need to familiarize the teachers with tools that provide a variety of educational needs and perform different tasks. To increase the quality of distance learning, teachers should develop and implement information technologies that contribute to the effectiveness of distance education.

Respondents’ answers regarding the duration of daily distance learning are presented in the figure below.
The survey demonstrated that vast majority of respondents used, first and foremost, those online tools to get ready for the classes that they used confidently before quarantining, for example, internet resources (95.1%) and electronic textbooks (75.3%).

Distance learning provides the opportunity to study at a convenient time for the student, at the pace that he/she chooses (within the prescribed time limits for the courses), and in the place where he/she is.

The survey shows that students pay much attention to educational and self-educational activities during quarantine. 99% of respondents carry out educational activities in quarantine, which tells us about responsible attitude towards their education.
education by the students. The positive trend is that 54.7% of students are actively engaged in self-education; 42.3% do this from time to time; and only 2.9% do not devote time to self-education and self-development. However, the content of these activities should be based on clear instructions from education departments, educational institutions, and with the support of all stakeholders. Integrating common goals, values, creating opportunities for students and teachers is the main task today.

Respondents’ answers on the time they spend preparing for the classes during the day are shown in the figure below.

![Figure 6 - Time to prepare for classes.](image)

Source: author’s calculations based on the conducted survey.

Distance education needs a reliable means of communication between students and lecturers. Therefore, the effectiveness of distance education begins at the point where a reliable communication method is established (Keleş & Özel, 2016). Among the main obstacles to distance learning in quarantine (multiple choice was allowed) the respondents indicated the following: limited access to the Internet – 44.5%; lack of motivation – 37.2%; vague instructions from teachers – 29.2%. Respondents also point to some factors that do not depend on the education system: network congestion, low speed of Internet, lack of up-to-date technical equipment, etc. The figure below demonstrates the main obstacles.
When asked about the quality of distance learning at a higher education institution, respondents answered the following:

The findings indicate a positive impact of online education. Furthermore, by comparing the results of time that the students are engaged in distance learning, the authors conclude that the amount of time for students’ independent learning has increased comparing with the traditional educational process.
Readiness of participants of educational process for distance learning

Figure 9 - Self-assessment of students’ computer skills.

Source: author’s calculations based on the conducted survey.

Among the other skills that respondents lack for effective online learning were the following:

Figure 10 - Skills that respondents lack for effective online learning.

Source: author’s calculations based on the conducted survey.

Access to the Internet gives the possibility of prompt access to informational resources of the educational institutions and the possibility of effective interaction of “teacher-student”, in both on-line and off-line modes. It grants the possibility of 24/7 access to study materials, ongoing assistance and guidance.
from faculty and teachers, on-line video lectures, virtual simulators and alternative technological solutions to establish an active learning process. Hence, it is of vital importance that all the participants of educational process have access to the Internet and good internet speed.

Figure 11 – Self-assessment of internet speed.

Source: author’s calculations based on the conducted survey.

When asked “What do you do during quarantine other than distance learning?”, the respondents indicated the following activities:

Figure 12 – Leisure time activities during quarantine.

Source: author’s calculations based on the conducted survey.

For 50.6% of respondents consider that Ukrainian students are totally ready for quality distance learning; 39.3% have the opposite meaning; 6.8% thinks that not
all the students can effectively study distantly; and 3.3% believe that distance learning can be effective only under certain conditions (special training, technical equipment, etc.)

Meanwhile, the respondents expressed their opinion regarding the readiness of teachers for effective distance learning. The answers are demonstrated in the figure below.

As for the students’ emotions caused by quarantine caused by COVID-19, according to the task, the respondents were required to indicate a one-word association for “Coronavirus”. Based on the results of processing the data obtained, it can be noted that male and female students differently evaluate and experience the current situation with the pandemic. Men are more concerned about practical and specific things that affect their lives, since they indicated such associations as: money, wasted time, loss of part-time job etc. Women are more likely to choose emotional and abstract figures, such as opportunity, development, purification, uncertainty, fear of panic etc.

At the same time, quarantine for men is an opportunity for rest, while for women it is time self-development.

For 80% of the respondents evaluate the current situation negatively and are too
emotional, which is reflected in their mental state; the respondents indicated such associations as fear, panic, madness, fraud, depression.

In general, the largest number of respondents indicated the word “uncertainty”, which testifies to the bewilderment of respondents and the lack of understanding of how to act today and what to do in the future.

Conclusions

Following the presented findings, the authors have tried to outline the current problems that directly affect the introduction of full-fledged distance learning in Ukraine:

- insufficient qualifications of some teachers (conservatism, psychological barrier and unpreparedness for on-line education; inertia to innovations; low motivational level to develop distance courses and work on remote technologies);
- excessive bureaucracy of distance learning;
- low funding of the development of distant learning technologies, upgrades of computer equipment and facilities, access to the Internet for teachers;
- poor public awareness of distance learning;
- lack of adequate technical equipment and access to the Internet for students living in rural areas.

Summing up the data analyses, the study draws the conclusion that the present distance learning in Ukraine does not meet the requirements of modern information society. In order for the distance learning system to take a worthy place in the education system of Ukraine, the above mentioned problems need to be solved.

In the framework of the research, some approaches to solving the problems of introducing distance education in higher educational institutions can be singled out:

- development of the concept of distance education;
- development and adaptation of the corporate network of universities, bringing the capacity of the telecommunication channel (Internet access) to the minimum necessary to meet the requirements ensuring the educational process of distance education;
- creation of electronic textbooks and teaching materials adapted for distance learning:
  - acquisition and implementation of network tools;
  - consolidation of efforts of organizers and developers;
  - search, purchase and implementation of existing electronic textbooks and teaching materials;
- organization of training and
retraining of teachers and staff in the methodology and information technologies of distance education;

- creating an electronic library of an educational institution, integrating it into the corporate network of libraries in the region;
- entry into the International Association of Open Electronic Libraries, other relevant organizations;
- establishment of distance education centers in universities;
- creation of “Unified inter-university system of control of distance education”, which should be engaged in the development of uniform norms, standards, provide methodological support aimed at improving the educational process, as well as conduct selective control of educational institutions.

The results obtained, in our opinion, can enrich and broaden the academic experience, increase awareness of the faculty and staff in both Ukrainian and foreign educational institutions and foster their understanding of the current distance learning process. They might be used by the following parties:

- governmental agencies, the Ministry of Education and Science of Ukraine and other countries, education departments at various levels (to develop action plans, programs, activities aimed at supporting students and teachers in quarantine);
- higher education institutions to build communication channels, online support and informing students about work plans, available hardware and software, respond quickly to the needs of teachers and students, support educational innovation;
- postgraduate educational institutions and other institutions providing teacher training (to introduce and methodologically support online teacher training activities, in particular on the use of information and communication technologies and distance learning, informing about new online opportunities for teachers, advising them on implementation distance learning);
- other stakeholders, including public organizations (to support online quarantine learning, monitor and evaluate the level of access to educational services and the process of respecting the rights of students to education under quarantine and the constraints caused by it).

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