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# Distance learning in Ukraine in COVID-19 emergency

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**ABSTRACT**

The global outbreak of COVID-19, subsequent lockdown of universities, and suspension of on-campus learning have caught many higher educational institutions off-guard, challenging their ability to adapt to a new delivery system. Distance learning has come under the spotlight as the only option to avoid the disruption of the teaching-learning process irreversibly. The present study outlines the problems facing Ukrainian universities after the quarantine imposition due to the COVID-19 emergency. The research reveals that the emergency transition of Ukrainian universities to distance learning has not been smooth; both professor-tutors and students have been put at an unfair disadvantage. Additionally, the study intends to analyse the specifics of distance learning in the system of higher education of Ukraine in the emergency and activities of Ukrainian universities concerning the problems of transition to distance learning and utilisation of educational online platforms. An internet survey was conducted among Ukrainian university professor-tutors and students to explore the changes to the teaching-learning process under the COVID-19 emergency quarantine. Interviews with senior officials of leading Ukrainian universities were held to explore how they addressed the issue of the disruption of the education process due to the COVID-19 quarantine.

**KEYWORDS**

Distance learning; Ukrainian university; COVID-19; higher education system; collaboration software platform; online learning platform

## 1. Introduction

Distance education as a form of learning is growing in popularity due to its availability, practicality, and feasibility, for which every country's state policy strives. Many universities worldwide already offer multiple modes of learning to their students, which prompts considerable research into the quality of online learning in contrast to the offline mode, the efficacy of certain courses depending on their delivery mode, the 'teacher-student' engagement factor, ways of assessing academic performance, etc.

According to the Babson Survey Research Group, distance education enrolment growth is increasing in the USA. As of Fall 2016, 6,359,121 students were taking at least one distance education course, comprising 31.6% of all higher education enrolments. The proportion of the higher education student body taking advantage of distance education courses increased in each of the previous four years. It stood at 25.9% in 2012, at 27.1% in 2013, 28.3% in 2014, and 29.7% in 2015 (Seaman et al., 2018).

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According to the report of the *'Impact of Distance Education on Adult Learning'* (IDEAL) project in 2014, only 20% of the higher institutions of Europe that took part in the poll did not offer any distance courses, 9% were 100% online. In 50% of universities, online courses were supplementary to traditional learning, 20% were utilising a blended model of studying (Schneller & Holmberg, 2014).

Universities are demonstrating a trend to tailor innovation technologies to the requirements and needs conditioned by the industrial, economic, and social development of society: the learning platform *edX*, developed by Harvard and MIT, enables everyone to access Harvard and MIT courses, as well as their partner university courses via the internet; and the University of London offers distance learning via its *Virtual Learning Environment* for those who want to combine studying and working.

The accelerated development of the off-campus mode in the coming years may prove hundreds of brick and mortar universities, of lesser global ranking, unviable unlike the Ivy League colleges and universities that are predicted to enrol millions of students worldwide (Galloway, 2020).

According to the Law of Ukraine '*On Education*' (LE, n.d.), there are the following forms of receiving higher university education: institutional (intramural (daytime, evening), extramural, distance, network) and dual education which combines apprenticeships at a company with courses in a vocational school. The most widespread is intramural education that provides for 50% of in-class studying and 50% of individual work, with universities choosing their forms of interaction with students. However, the fact that 70% of universities in Ukraine are state-owned and state-funded may restrict their choice of learning modes. In contrast, private universities can take independent decisions regarding modes of delivery and implementation of innovative technologies.

A definition of distance education is provided in the Ukrainian law *'On Education*', in Paragraph 4 of Article 9 *'Forms of Obtaining Education'*. This definition describes distance education as an individualised process of gaining education, which usually involves mediated interactions between participants who are spatially distant but who operate within a particular environment according to modern psycho-pedagogical and information and communication technologies. (LE, n.d.)

The legal framework for organising distance education was adopted in Ukraine in 2013 by the Ministry of Education and Science of Ukraine (MESU) in its Order '*On Approval of the Provisions for Distance Learning*' (MESU, 2013).

In the wake of the COVID-19 epidemic on 12 March 2020, the Cabinet of Ministers of Ukraine, by resolution, imposed a quarantine at first until April 3, then until the end of the academic year.

Following the quarantine imposition, MESU locked down all types of educational institutions by issuing Order No. 406 of 16 March 2020 '*On Organization of Measures to Prevent the Spread of Coronavirus COVID-19*' (MESU, 2020a). This document provided for a distance mode of teaching-learning with the use of modern information and communication technologies according to the content of educational programmes and courses along with a ban on attending educational institutions by students. With the emergency unfolding, MESU issued subsequent normative documents '*On Temporary Transition to Distance Learning*' and *'On Organising Blended Learning in Higher Education Institutions and Colleges'* with recommendations on technical requirements, tools, skills for online

teaching, and detailed guidelines for the transfer of courses online and assessment of student performance (MESU, 2020b, 2020c).

Academic freedom and the autonomy of universities (Article 1 of LE) provide for self-governance, self-independence, and responsibility in making decisions regarding the educational process and organisational issues (LE, n.d.). Based on this, universities could take independent decisions on the organisation of the educational process in the COVID-19 emergency, taking into consideration the recommendations of MESU and abiding by the Law of Ukraine.

Ukraine has been reluctant to fully incorporate distance learning. Traditionally, students prefer in-class studying. However, academic freedom has allowed professor-tutors and students to utilise some specialisation courses on available online learning platforms as supplementary to existing teaching.

In the wake of the COVID-19 quarantine, distance learning has become a challenging form of interaction for both Ukrainian professor-tutors and students. However this is not the first time universities have had to move online. In 2009, due to the flu epidemic in the country universities switched to distance learning, and in 2015–2016, due to low temperatures, the second semester started online. Furthermore, universities that evacuated from territories temporarily occupied by Russia to other Ukrainian cities, learned to work in an emergency by implementing various forms of distance learning as supplementary or as an alternative to traditional in-class learning.

Regardless of the challenges, Ukrainian universities have been gradually incorporating distance learning. Though a centralised platform and unified approaches are still lacking, universities, faculties, departments, and professor-tutors are enjoying academic freedom to apply an individual approach. Naturally, the quality and efficacy of the delivery mode varies considerably, with the students' individual work assessment criteria remaining an 'Achilles' heel' for many universities and their faculty staff. Moreover, students need to adapt to each professor-tutor's requirements, which may hamper academic performance.

This research aims to monitor and analyse the processes in the sphere of higher education in the emergency; the mechanisms for addressing the problems of transition, and for the further incorporation of distance learning at Ukrainian universities.

## 2. Literature review

There exists a considerable body of literature on various aspects of distance learning. Guri-Rosenblit (2018) observes that the discourse on the implementation of digital technologies in higher educational institutions focuses mainly on teaching students rather than on teaching faculty members, thus underscoring the issue of digital literacy skills of professor-tutors.

American scientists Xu and Jaggars (2013), concerned with the problem of student adaptation to learning online, researched 500,000 courses taken by over 40,000 students to study how well the students adjusted to the online environment relative to their ability to do so in face-to-face courses. They concluded that learning online hampered students' academic performance, though different groups of students demonstrated different efficacy of online learning as regards subject areas, English and Social Science, for example, proved less adaptable to online learning. The authors suggested that those subject areas demanded more 'teacher-student' engagement.

The strategy of distance learning is also examined in the literature. Teo and Williams (2005) describe the strategy of the integrated learning environment. According to them, one of the major advantages of an online learning environment is that, by using the potential of various information and communication technologies, varied individual learning needs can be met.

Gaskell (2016) analyzes online education through the system of massive open online courses (MOOCs), highlighting their potential to strengthen the role of the leading universities in the world.

Pappas (2017) encourages individual problem solving and group projects on the internet to develop teamwork skills. The scientist stresses that e-learning courses should be learner-centred and practice-oriented. To reach the goals of an e-learning course the author suggests creating a list of e-learning resources and modules, developing an interactive map of an e-learning course, and creating online-forums and e-learning blogs that will encourage feedback from students.

Neroni et al. (2019) study relations between learning strategies and academic performance at a distance learning university. Their mixed model analysis shows that management of time and effort, as well as complex cognitive strategy-use, are positive predictors of academic performance.

Specifics of modular assessment and evaluation processes in distance learning are analysed by Kara and Cebi (2012) who concluded that in distance education, while students are evaluated, in addition to the exams, the log records, analysis of student behaviour, participation in discussion forums, material and information sharing, sending homework and projects on time and properly, active participation in synchronous courses should be considered as other criteria.

Kör et al. (2014) researched the efficacy of educational materials in distance learning, observing that animation, simulation, and interactive practices are less frequently used in the process of course material preparation. It is suggested that the visual richness of educational materials promotes better understanding, makes courses more pleasant, and increases students' motivation.

The above research findings appear to fully explain Ukraine's moderate success in the distance learning mode before and during the COVID-19 pandemic. Well-timed incorporation of digital learning technologies and relevant digital literacy might have become the necessary springboard to help overcome the challenges of the COVID-19 emergency transition in Ukraine more effectively.

Over the course of the quarantine, extensive literature has been developed on the distance learning challenges and solutions in the emergency. In our research, of special interest is international experience pertaining to the digital literacy skills of professor-tutors in the COVID-19 emergency, efficient distance learning tools and the implications of the emergency transfer to distance learning.

Zhu and Liu (2020) present an online teaching implementation plan of five actions and speculate about online teacher education platforms that could function as a traditional teacher education institute, providing pre-service and in-service programmes and assisting teachers in becoming more resilient to a crisis similar to the COVID-19 pandemic.

Zhu (2020) stresses how crucial the provision of high-quality post-pandemic distance education for professor-tutors is, suggesting a blended approach consisting of offline and online teacher education.

Ives (2020) claims that effective teaching online requires an intentional, thoughtful approach to instructional design, especially at a time when students are being asked to transition at an unprecedented pace in the wake of the COVID-19 outbreak. She recommends simple tasks, encourages autonomy, emphasis on content, and the choice of the most appropriate instrument for the online class.

A recent study by Basilaia et al. (2020) concludes that distance learning tools should offer video conferencing and pre-recorded lectures, and enable student discussions and instant feedback. Accessibility of lectures via mobile phones is also crucial.

Possible implications of distance learning in the COVID-19 emergency and ways of addressing them are identified in relation to low student engagement (Ferri et al., 2020), absence of professor-tutor relationships (Mukhtar et al., 2020), and mental health deterioration (Thomas & Rogers, 2020).

The review of international publications has demonstrated there are some universal problems of distance learning which need to be addressed. Especially relevant to our research aim is the urgency of mastering digital skills by both students and professor-tutors on specially created online platforms; implementation and further evaluation of the differing efficacy of distance learning tools on students; adaptation of existing assessment criteria; and psychological support to minimise mental health deterioration among students and professor-tutors.

## 3. Materials and methods

In our research, we attempt to determine how the COVID-19 pandemic has changed approaches and attitudes to distance learning at universities across Ukraine.

For this, it was necessary to analyse trends in the educational sphere during the emergency. We employed both quantitative and qualitative methods which enabled us to pinpoint the problems of Ukrainian university education in the COVID-19 emergency.

The method of social investigation was used to conduct a Google Forms survey among students and professor-tutors of Ukrainian universities on using distance learning under the quarantine.

Among 304 respondents, 46% were professor-tutors, 54% – students. Among the universities, 42 were state and eight were private. We asked the following questions (Question 5 was open-ended and optional):

(1) Which distance learning tools has your university used due to the COVID-19 quarantine?
(2) Were distance learning tools used in the educational process at your university before the quarantine?
(3) What online learning platforms are you using for online courses?
(4) Is distance learning compulsory at your university? Is there a compulsory collaboration software platform at your university?
(5) What do you think about distance learning? What are the positive and negative consequences of its extensive use?

A comparative method was used to analyse the availability of the distance learning mode and collaboration software platforms at Ukrainian universities, use of social

networks as a means of communication between professor-tutors and students, the most popular distance learning tools (Figure 3); the availability of the distance learning mode at universities before the quarantine, with subsequent conclusions as to the understanding of the notion of distance learning in the answers of professor-tutors and students, different views on the structure and content of distance learning (Figure 4); the most popular online tools among students and professor-tutors, with subsequent findings of the financial capabilities of Ukrainian students to access such tools (Figure 5); and the distribution of online learning tools at universities before the quarantine (Figure 6) to help understand the preparedness of universities for emergency remote teaching.

Personal interviews were held to explore the responses of senior officials of universities regarding the transition to distance learning and the preliminary outcomes of the teaching-learning process under the quarantine. In our case, the objective was not quantitative. We were interested in the answers to the 'how' and 'why' questions regarding given universities. The monitoring of answers was conducted through surveying and examining the university websites for their announcements related to emergency remote teaching.

The statistical method was applied to reflect the growth in the number of Ukrainian universities of different forms of ownership and their graduates between 1991–2020 (Figs. 1and 2).

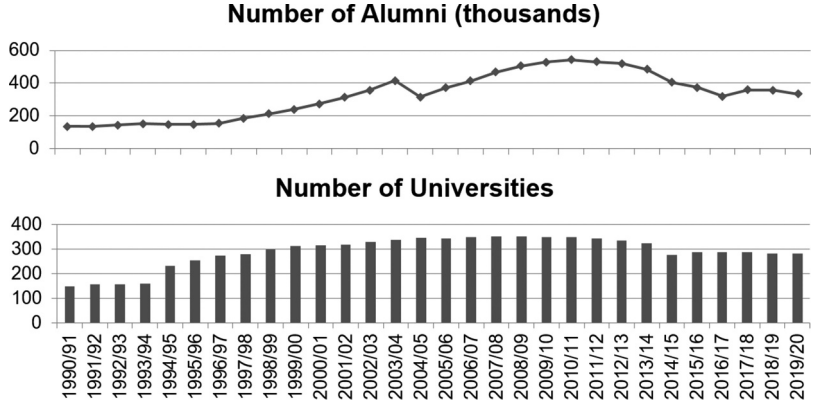


Figure 1. Number of alumni, number of universities, 1990–2020, Ukraine (SSSU, 2020a).

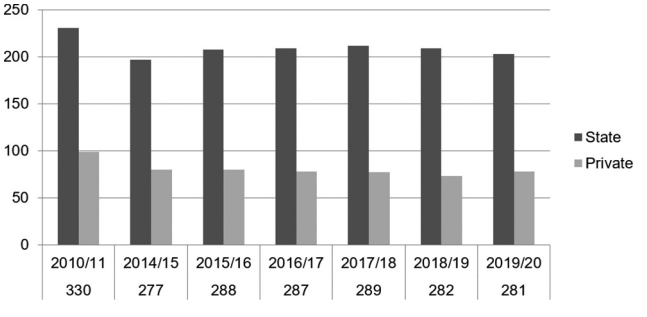


Figure 2. Number of state and private universities, 2010–2020, Ukraine (SSSU, 2020b).

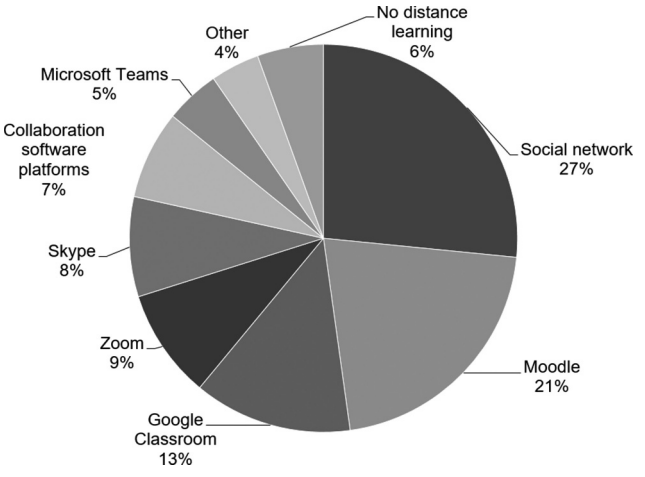


Figure 3. Distance learning tools, which Ukrainian universities use during COVID-19 quarantine.

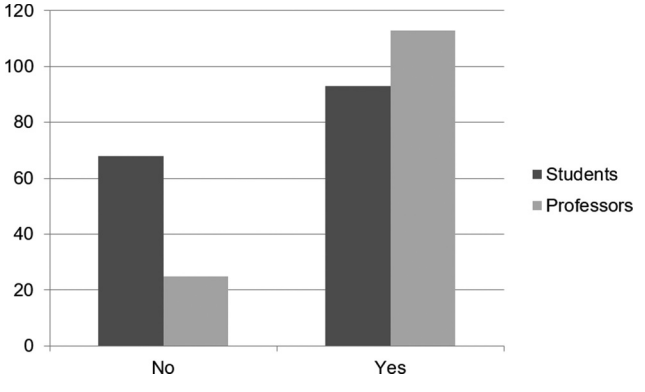


Figure 4. Distribution of answers to the question: Were distance learning tools used at your university before the quarantine? (Number of respondents).

## 4. Results and discussion

University education in Ukraine has a long history and rich traditions. It traces its roots to the National University of Ostroh Academy (1576), National University of Kyiv-Mohyla Academy (1615), and Ivan Franko National University of Lviv (1661). Founded in 1834, Taras Shevchenko National University of Kyiv is the largest Ukrainian university.

At the start of the 2019–2020 academic year, there were 281 universities in Ukraine. According to the State Statistics Service of Ukraine (SSSU), this number has increased since 1990 (Figure 1): from 19 universities to 281, the number of alumni has grown 2.5 times from 137,000 to 334,000 people.

Most Ukrainian universities are state-owned (Figure 2). Based on the 2019–2020 statistics, of 281 universities, 203 are state and 78 – private.

Ukraine has been incorporating distance learning into its traditional mode of delivery for some years in the form of topics and modules, which are offered by international and national online learning platforms. But its modest gains substantiate that Ukraine's further

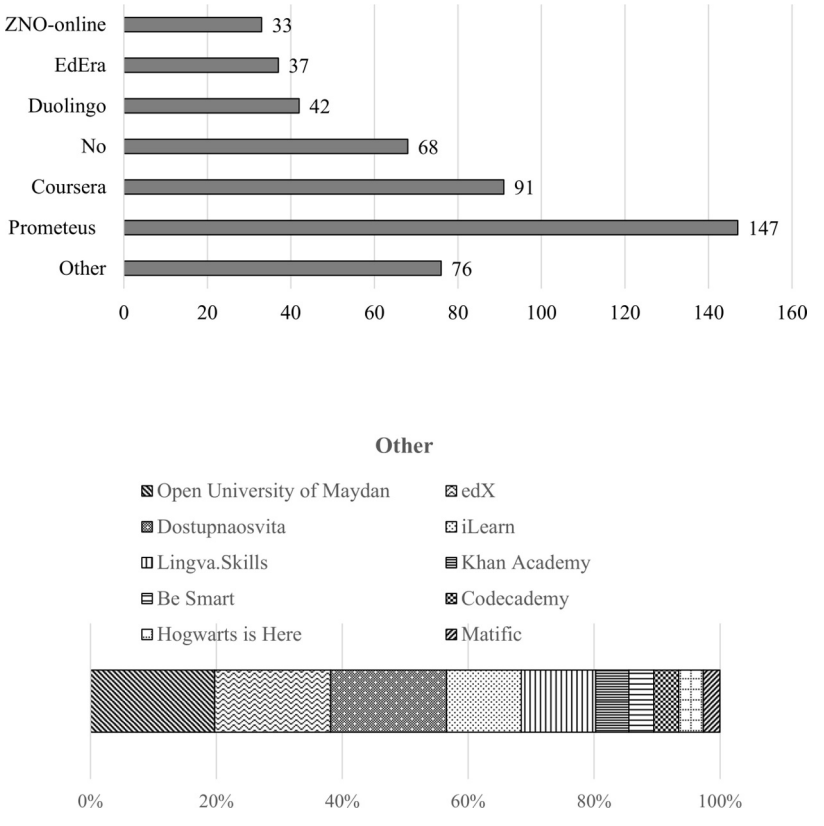


Figure 5. Online learning platforms.

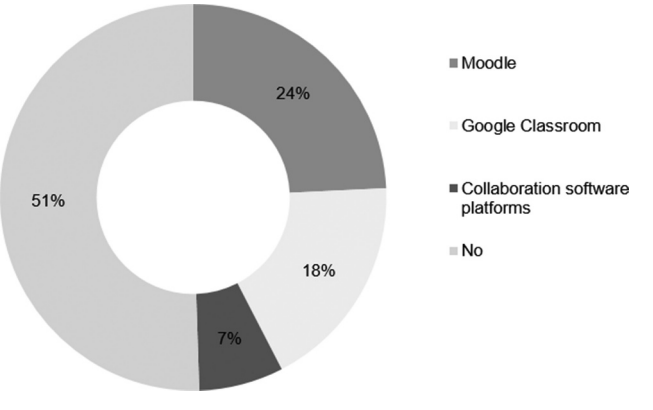


Figure 6. Distribution of online learning tools, 12 March 2020.

advances rely heavily on the expertise of world pioneers and leaders in the field and require joint efforts by prominent Ukrainian universities and the creation of national projects.

The most popular Ukrainian online learning platform is *Prometheus*, an independent open-source project that runs on the open *edX* platform, designed and implemented by

MTI and Harvard University, and offers online courses. Since its start in 2014, hundreds of thousands of learners have used *Prometheus*. The platform's over 150 free online courses cover the following fields: civics, history of Ukraine, entrepreneurship, political sciences, data analysis, information technologies, etc. The platform cooperates with both the academics from the leading universities (*Taras Shevchenko National University of Kyiv, National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', and National University of Kyiv-Mohyla Academy*, etc.) and high-profile practitioners from companies such as IBM, Microsoft, videoGorillas, EPAM, etc. The platform offers the following sections: *MOOCs*, online education, innovations in education, education for everyone, and blended courses.

In most state universities in Ukraine, the traditional teaching-learning mindset dominates; though professor-tutors who are familiar with modern technologies and seek to refine their teaching methods incorporate online learning. Poor technical capacities of universities and chairs and the absence of licenced software are reasons why all professor-tutors work from their own computers, whereas the scientific and educational information resources of the university are accessible mostly from university computers, which further complicates distance learning.

In the wake of the COVID-19 quarantine, by the decision of MESU, universities were required to teach all courses remotely except for those which included laboratory work. These were to be postponed until the quarantine was cancelled. Each university, as an independent educational institution, has developed its procedures and ways of delivering distance learning, compiling lists of the available internet resources for each course, and of university web resources tailored to the course content and requirements.

According to the results of the survey, in 6% of the universities distance learning is non-existent (Figure 3). Only 7% of the universities have collaboration software platforms available for their faculty staff and students. Most universities (92%) use various distance learning tools simultaneously, 27% of the respondents name social networks as an additional communication tool during distance learning.

The Centre of Distance Learning Technologies at Borys Grinchenko Kyiv University, utilising *Moodle*, has ensured that during the quarantine its professor-tutors and students have lectures and practical classes according to the schedule. Among other platforms, the respondents from this university named *Google Classroom, Hangouts, Skype, Webex*, and social networks.

University collaboration software platforms function at 12 Ukrainian universities, among which are National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', National University of Kyiv-Mohyla Academy, Uzhhorod National University etc. The most popular distance learning tools appear to be *Moodle* and *Google Classroom* – 34% of the universities utilise them.

Ten percent of the respondents named social networks and email as the only tools of distance learning in the quarantine period and 6% of the respondents reported no distance learning mode at their institutions (e.g *National University of the State Tax Service of Ukraine*) which reflects the inability of these universities to maintain a critical technological edge and a lack of understanding of the specifics of distance learning.

*Kyiv National Economic University named after Vadym Hetman, Ukrainian Catholic University* favour *Zoom Cloud Meetings*, and *O.M. Beketov National University of Urban*

*Economy in Kharkiv, Taras Shevchenko National University of Kyiv, National University of Kyiv-Mohyla Academy*, and *Uzhhorod National University* use *Skype*.

Following the findings of the survey, it is possible to conclude that professor-tutors utilise available distance learning toolkits, which may be perceived as a blended form of interaction with students:

(1) fully-featured teaching-learning via university collaboration software platforms, *Moodle*, and *Google Classroom*;
(2) communication via social networks and email, online classes via *Skype, Zoom, MS Teams, Google Meet*;
(3) absence of fully-featured distance learning with inconsistent use of mixed tools.

Regarding Question 2, 68% of the universities used some form of distance learning before the quarantine but further analysis revealed that most respondents understood downloading of educational materials into university collaboration software platforms, and students sending back completed assignments for grading, as distance learning. The feature of modern education is digitisation that makes accessing and reading educational materials and watching presentations, videos etc. on a computer or tablet easier, but this cannot be called distance learning. Such a distorted perception of distance learning is seen in Figure 4: 18% of professors and 42% of students thought that distance learning had not been available at their universities before the quarantine.

Regarding Question 3, among the suggested online learning platforms, the respondents named *Prometheus*: 54% of them use it for online courses, followed by *Coursera* – 33.5% (Figure 5). We explain the relatively low popularity of *Coursera* in terms of pricing, as Ukrainian students are mostly financially disadvantaged. Among our respondents, 22% of students are unable to pay for online courses. It is worth mentioning that distance learning is not a compulsory component of the educational programme of a course in formal education. Rather, distance learning is viewed as a form of knowledge acquisition. Professor-tutors may include the topics, which correlate with free courses on *Prometheus* into their courses and assess them as part of informal education.

Availability and implementation of online learning tools are important for understanding whether universities are ready for distance learning. Our survey findings of 50 Ukrainian universities demonstrate that 50% of the universities have not installed such tools; at 24.2% of the universities *Moodle* is compulsory, at 18.2% – *Google Class*, and 7.1% have installed their own collaboration software platforms (Figure 6). The latter are available mostly at state universities and only one private university – *Interregional Academy of Personnel Management*.

In the interviews, senior officials of such universities as *National University of Kyiv-Mohyla Academy, Taras Shevchenko National University of Kyiv, National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', Sumy State University*, and *National University of Water and Environmental Engineering* talked about distance learning progress at their universities following the first three weeks of the quarantine.

*National University of Kyiv-Mohyla Academy* is a leader in the development of the distance learning mode in Ukraine. In 2018, its *Moodle-based DistEdu* platform became part of the university project '*Digital University*'. In our research interview, the Vice-President of the *Academy*, V. Ozhogan, noted, 'The coronavirus pandemic has forced

people to move from real into a virtual world, transforming *National University of Kyiv-Mohyla Academy* into the cyber academy (. . .) the students are using *DistEdu*, which offers 800 courses via cell phones too, as *DistEdu* is available as an app'.

According to O. Poddenezhnyi, the head of the *Distance Learning Centre at National University of Kyiv-Mohyla Academy*, during the first week of work, his team implemented the system of distance education and prepared over a dozen webinars for the professor-tutors and students with user instructions for *DistEdu* system. Now professor-tutors are utilising *MS Teams* and *Zoom*, and the Centre is responsible for technical support. Between March 11 and 23 March 2020, the Centre registered 3,421 unique users (over 90% of students and professor-tutors).

Prior to the quarantine, a centralised system of distance learning was not used at *Taras Shevchenko National University of Kyiv*. Each faculty or institute chose their own way of interacting with students. Some professor-tutors had face-to-face lectures only; others interacted with students in their individual formats. Professor V. Bugrov, Vice-Rector for Education and Research (now Rector), in the interview named the following distance learning problems:

(1) Difficulty (or inability in some cases) to organise practical classes and laboratory works – mostly in natural science and engineering courses, as well as mathematics.
(2) Students may encounter psychological barriers as to understanding educational material online, and professor-tutors may lack psychological readiness for online teaching.
(3) Difficulty in organising a unified online schedule and lack of motivation among students to permanently work autonomously.

Between November 23 and 29, 2020 the Student Parliament of *Taras Shevchenko National University of Kyiv* conducted its annual survey on the quality of education. In light of the lockdown the survey related to distance learning. According to the results of the survey in which 959 students, representing all the faculties, took part, 65% thought distance learning successful, 72% reported more work associated with distance learning via *Moodle, Google Class, Google Hangouts, MS Teams, Skype*, and *Cisco Webex*, 35% of the respondents spend between 3–4 hours on educational materials, and 46% – more than 5 hours per day. (The results of the survey were made available on the university collaboration software platform).

The Vice-Rector of *National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute*', A. Melnychenko, explained that studying during the COVID-19 quarantine is no different from traditional learning: professor-tutors are interacting with their students online, sending downloads of new lectures and assignments, setting deadlines, and grading students' papers. 'We are utilising the university collaboration software platform "*Electronic campus*"'. It functions as a depository of training materials with personal accounts to which students can log in to receive access and interact with their professor-tutors. Moreover, both the faculty staff and students are encouraged to use other platforms as well. In particular, the faculty members who have had in-service training are recommended to use *Moodle* in their distance learning. Alternatively, both professor-tutors and students are welcomed to hold *Skype* conferences, use chat-based communication, etc."

In his interview, the Vice-Rector for Scientific and Pedagogical Work of *Sumy State University*, O.Brizhatyi, noted that in the last 15 years the university has created a highly effective information and telecommunications system, opened a unique training and research laboratory of virtual and augmented reality, which can be used to construct virtual training objects for different educational programmes, a new video studio where training materials are being created through the use of virtual background and renewed online studio that facilitates the organisation of training and scientific webinars and allows public paper defences etc. to be conducted online. Digital technologies, e-learning, and blended education that use personal accounts facilitate communication and the interactive skills of professor-tutors and students during forced isolation. The quarantine has prompted the expansion of the application of innovative methods of distance learning and activated students' engagement into search work. According to O. Brizhatyi, 'After the quarantine is over, we predict further development of electronic technologies of distance learning, since acquired innovative competencies of both professor-tutors and students can be actively used in traditional face-to-face teaching'.

At *National University of Water and Environmental Engineering*, e-journal and e-schedule have been available since 2012. Students, professor-tutors, faculties, and departments have personal accounts with grade books, absence tracking, and credit and examination records. According to the director of Information and Computing Centre, V. Nazaruk, learning during the quarantine has moved from traditional classrooms to *Google Meet, Zoom, Telegram*. With *Moodle*, the faculty staff create their course pages to add electronic textbooks, lectures, methodological recommendations for practical and laboratory assignments. *Moodle* is also used for exams, which excludes any face-to-face interaction. The exams are coordinated by *The Teaching and Scientific Centre of Independent Assessment*. For laboratory assignments that need equipment and special premises, the university uses *Workbench, Multisim, Packet Tracer*, and *MATLAB*. For 5 years *National University of Water and Environmental Engineering* has been using '*Google in Ukraine*', which enables free access to such resources as email, google-discs, documents, calendars, IP Telephony and image transmission. Before the quarantine *Google Meet* was used for interactive conferences. Since 12 March 2020, the tool has been used for online lectures, practical classes, and laboratory sessions.

*Kharkiv National University of Radio Electronics* is organising learning via its *Moodle-based* university collaboration platform *'KNURE Distance Learning'*. This platform is a dynamic learning environment, with students enrolling in over 1,200 curriculum-based distance courses, receiving educational materials, doing assignments, and professor-tutors giving feedback and grading. Between March 12 and 17, 2020, more than 11,000 visits were registered on the university platform.

During the quarantine, *Ukrainian Catholic University* is encouraging students to take certificate courses on *Coursera*, which may provide academic credits (if pre-agreed with the professor-tutor). All the faculties of *Ukrainian Catholic University* have compiled their collections of recommended courses for each programme, with some professor-tutors adding *Coursera* modules to their educational programmes as well.

During the quarantine students at all Ukrainian universities have received access to free educational resources. For instance, *Coursera* has launched *'Coursera for Campus Coronavirus Initiative'* – free access to 3,800 courses and 400 specialisations through 31 July 2020. *Taras Shevchenko National University of Kyiv, National University of Kyiv-*

*Mohyla Academy, Ukrainian Catholic University, Donetsk State University of Management, Kharkiv National University of Radio Electronics*, and other universities of Ukraine are among 16,000 university communities that have accessed this initiative.

At an early stage, professor-tutors were unprepared to deliver full-featured online teaching. Obstacles arose due to the absence of university collaboration software platforms (available only at 7% of the surveyed universities at the time of transition online). When answering Question 5 of the survey professor-tutors named video conferencing software *Google Meet, Zoom*, and *MS Teams* as the services they utilised. The low popularity of MS Teams is explained by the absence of access to corporate accounts. Free access and easy use have promoted the application of *Zoom* in the learning environment of Ukraine. However, a 40-minute session limit in *Zoom* does not align with the standard lecture duration of 80 minutes. As a result, among responses to Question 5 were suggestions to make online classes 40 minutes long as most suitable, less tiring, and focus retaining. In line with this, professor-tutors experimented with the segmentation of topics into subtopics 40 minutes each, with simple and understandable tasks. Eventually, professor-tutors turned to *Google Meet* with unlimited *Meet* calls.

Other proposals of professor-tutors included setting tasks and their grading criteria at the beginning and the end of a class; if the topic foresees several tasks, which students must do autonomously, then each task should have a separate deadline with 2 to 3-hour intervals.

Ukrainian students have different technical capacities (based on the answers to Question 5 of the survey). Only some students have unlimited internet access, modern computers, and online learning experience. Since most students have left their campuses, one cannot be sure that all remote towns and villages enjoy fast and uninterrupted internet access to take online courses. In addition, not all students have modern electronic devices whose technical characteristics enable them to view educational materials and complete assignments. As a rule, these issues become the problem of professor-tutors and students.

Not all students are ready to move online (based on the answers to Question 5 of the survey). Upon admission, they expected in-class discussions, group work, and immediate feedback from professor-tutors and other students.

## 5. Conclusions

The COVID-19 pandemic has exposed numerous challenges, highlighting the urgent need to reform approaches and update attitudes to distance learning at Ukrainian universities.

The faculty and students in Ukraine were unprepared for a quick transition to distance learning. The main reasons for this were the absence of distance learning programmes and inability to quickly adapt traditional curricula and educational programmes to online mode. Few professor-tutors had utilised the elements of online teaching prior to the quarantine.

By moving to distance learning, the universities in which this type of delivery was not compulsory before the COVID-19 emergency, have transferred their educational programmes online. Professor-tutors are either creating online classrooms or sending

presentations with lectures and accompanying assignments via email. However, the traditional way of organising lectures and practical classes appears to be ineffective online.

In most state universities in Ukraine, the traditional teaching-learning mindset dominates. Not all professor-tutors have practical experience of teaching online effectively. With the sudden transfer to distance learning a considerable number of Ukrainian tutors failed to understand and adjust to its principles. Those tutors, who had gone online in their teaching before the quarantine, proved the best prepared.

There is no available unified distance learning platform at Ukrainian universities: 18% of universities use *Google Classroom*, 24% – *Moodle*, 7% – collaboration software platforms. 51% of the universities do not use any online platform, with professor-tutors choosing their tool of communication with students such as *Zoom, Skype, Google Meet, MS Teams* or sending assignments via email and social networks. Online learning platforms that offer access to online specialisation topics and modules are utilised as supplementary tools. Among the most popular are such platforms as *Prometheus, Coursera, Duolingo, EdEra*, and *ZNOonline*.

Our survey conducted among students and professor-tutors of Ukrainian universities as to the use of distance learning under the quarantine has led to the following conclusions: most Ukrainian universities are not limiting themselves to one distance learning tool and use social networks and email as supplementary tools of interaction; for 10% of our respondents social networks and email remain the only distance learning tool. Professor-tutors use available distance learning toolkits, which may be viewed as a blended form of interaction with students.

Consequently, there has been no transition to fully-featured distance learning in Ukraine. Instead, what we are seeing now is traditional learning at a distance with some elements of online learning. Universities in Ukraine, as autonomous institutions, can choose modes of learning delivery in line with their type and needs. As of today, each faculty, and even professor-tutor is free to select their tools of teaching and interacting with students. Maintenance of the critical technological edge remains a major concern.

Among their main priorities, senior university officials have named the implementation of collaboration software platforms and incorporation of online courses into traditional learning after the quarantine is over.

Despite all the tragedy associated with the COVID-19 quarantine, such an extreme transition to distance learning has given an impetus to teaching online, creating new online courses, video lectures, etc. The interviews with the senior officials of the Ukrainian universities allow for optimism: when the quarantine is over, Ukrainian universities will seriously address distance learning, making university education more blended with wider online opportunities for both professor-tutors and students.

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