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## The New Challenges of Kazakhstan's Education System: Distance Learning and the Student Environment

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**Abstract.** The article deals with the problems of students' adaptation to learning in a distance format. For this purpose, at the end of September – middle of October 2021 we conducted an experimental study among students studying at one of the leading universities of Kazakhstan – L. N. Gumilyov Eurasian National University. We analyzed the answers of 229 respondents to the questions, the content of which was aimed at identifying various factors that influenced the learning system in the context of pandemic COVID-19. The results of the study helped to identify the students' attitude to the transition to online learning, find out their preferences in the education format, analyze the strengths and weaknesses of online learning, to conclude on the need to develop new approaches to its application. Such research is highly relevant today, as it can serve to develop a qualitatively new learning environment for students in the future. This provides an opportunity to coordinate the educational policy of a university, draw conclusions and make appropriate decisions to improve the education system in order to improve its quality. Undoubtedly, further multidimensional study of current distance education processes and its impact on the formation of professional competences is necessary.

**Keywords:** COVID-19, education transformation, online learning, digital resources, educational process, learner satisfaction, education development prospects.

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## Новые вызовы системы образования Казахстана: дистанционное обучение и студенческая среда

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**Аннотация.** В статье рассматриваются проблемы адаптации студентов к обучению в дистанционном формате. С этой целью в конце сентября – середине октября 2021 года мы провели экспериментальное исследование среди студентов, обучающихся в одном из ведущих казахстанских вузов – Евразийском национальном университете им. Л. Н. Гумилева. Нами были проанализированы ответы 229 респондентов на вопросы, содержание которых направлено на выявление различных факторов, повлиявших на систему обучения в условиях пандемии COVID-19. Результаты исследования позволили выявить отношение студентов к переходу на онлайн-обучение, выяснить их предпочтения в формате образования, провести анализ сильных и слабых сторон онлайн-обучения, сделать вывод о необходимости разработки новых подходов к его применению. Подобные исследования крайне актуальны сегодня, так как они могут послужить в будущем для разработки качественно новой среды обучения для студентов. Это дает возможность скоординировать образовательную политику вуза, сделать выводы и принять соответствующие решения для совершенствования системы образования с целью повышения ее качества. Безусловно, необходимо дальнейшее многоаспектное изучение текущих процессов дистанционного образования, его влияния на формирование профессиональных компетенций.

**Ключевые слова:** COVID-19, трансформация образования, онлайн-обучение, цифровые ресурсы, образовательный процесс, удовлетворенность обучающихся, перспективы развития образования.

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### Introduction

The relevance of the study stems from the need for a more in-depth understanding of the changes that have taken place in the new demands for high education brought about by the COVID-19 pandemic.

As we know, both distance education and online learning are not new approaches in education system, nevertheless the new context

of the COVID-19 pandemic has brought significant adjustments to life. The transition to online and digital formats of education and distance learning has revealed a number of challenges for teachers and students. Direct pre-lockdown interaction between teacher and student was understood as classroom-based learning at a particular time in a particular place. The pandemic that began demanded an

urgent transformation of traditional teaching methods, where face to face is replaced by a virtual format, with digital technology being one of the important components.

The emergence of the emergency situation – lockdown – required all actors in the education system to address many issues in the shortest possible time, which of course affected the quality of education received in distance format. All this has caused great concern in society, since it has involved not only those who teach and learn, but also all those who accompany this process (leaders, administrators, parents, etc.). All of them were faced with the need to look differently at the technology used and to change their methods and approaches to learning. Nevertheless, the question of the effectiveness of the online learning system remains open.

Today it is time to evaluate the changes that have taken place, to determine the impact of the efforts applied and the future prospects of the programs being developed. There is a clear need for new research that will bring clarity to the changes that have taken place, not only in the revision of teaching methods, but also in the minds of learners and learners, in the views on the education system as a whole, in approaches to education management and organization.

Therefore, this article is a generalization of the results of experimental research into the students' reflection on the changes which they witnessed and participated in during the lockdown period and afterwards. The obtained results make a certain contribution to the empirical base of the ongoing research, contributing to an objective understanding of the emerging contradictions, those transformational processes that took place during this period in the learning system. In addition, the findings will contribute to the development of the further organization of online learning in its combination with the traditional format.

The aim of the study was to identify students' attitudes to the format of online learning on the example of one of Kazakhstan's leading universities – L.N. Gumilyov Eurasian National University (ENU). Identified subjective and

objective factors in the difficulties encountered in the period of online learning, analyzed the positive and negative aspects of this form of learning, provided recommendations for possible formats of training with the use of digital learning technologies.

Structure of the article is as follows: in the introduction defines the relevance, aims and objectives of the study, the second section gives a critical review of the most important in terms of research topics, the third section describes the research methods used, the fourth section presents the results of the survey, and finally, the conclusion and recommendations are presented in the conclusion.

The study used both general scientific theoretical methods of research, which include analysis, synthesis, synthesis of scientific literature on the topic of research, as well as methods of empirical nature, consisting in conducting a survey, classification and systematization of the results.

In accordance with the objective set in the paper, the following tasks were solved: 1) to identify how ready students are to switch to online learning 2) to find out the most important factors of adaptation to this learning format; 3) to determine students' preferences in choosing offline or online learning formats; 4) to trace the dependence of preferences depending on financial situation, availability of necessary technical tools, and external factors (Internet, learning conditions, teacher competence, etc.).

Authors take into account that it is not possible to fully assess the analytical view of the online learning experience in a short period of time on a limited number of respondents, but the results of the study may nevertheless be of interest for further, more in-depth and extensive developments.

### **Theoretical framework**

The consequences of the pandemic have undoubtedly brought about major changes in many spheres of human activity, including education. The extent of its impact on the academic environment is evidenced by the numerous discussions of the emerging problems and their consequences in the media and in social networks.

It should be noted that the idea of distance learning for students is not new and was first implemented in 1840 by Isaac Pitman, who taught students the techniques of stenography, sending tasks and getting answers to them with the help of postcards. Thus, the first, correspondence-based distance-learning model was born. It was successfully used by the Open University in Great Britain, which developed a great number of methodical aids and teaching materials for work with distance students. The development of the second (translational) model of distance learning is connected with the appearance of the telephone and television. This model became widespread in the mid-20<sup>th</sup> century in the USA, due to the introduction of the public broadcasting system (PBS TV), which united more than 1,500 colleges and several TV companies (Gu J. et al, 2020). For example, the development of distance development is recognized as one of the most important areas of leading educational programmes of UNESCO “Education for All”, “Education Throughout Life”, “Education Without Borders”. In the founding treaty of the Maastricht Treaty of the European Union, the promotion of distance education is seen as a priority, and the American weekly “The Chronicle of Higher Education” called the level of activity of the distance education industry in the last three years “staggering” (Distance Education, 2001).

The existing pre-pandemic literature on distance learning has raised different questions about the methods and techniques of this type of learning in the era of ongoing globalization processes. Numerous authors in their studies provide a critical review of current views and approaches to different forms and methods of the learning process, arguing for their perspectives. According to (Bozkurt, 2020), the most discussed topics in almost three decades were: multimedia learning and learning design (1993–1999); convergence of educational technology, distance education and online learning environments, and integration of educational technology in traditional learning environments (2000–2004); revision of curricula on educational technology, including educational technology in higher education and distance education, eliminating significant differences

in research on educational technology (2005–2009); online learning and higher education, integration of ICT and pedagogical potential of educational technologies (2010–2014); intelligent educational technologies, big data and learning analytics (2015–2019) (Bozkurt, 2020). Undoubtedly, most of the publications are devoted to the new opportunities offered by distance learning technologies in the sphere of education. However, as Bozkurt notes, such absolute faith in the effectiveness of educational technologies is the “Achilles’ heel” of this field (Bozkurt, 2020).

The COVID-19 pandemic has accelerated and intensified the use of digital technologies and their impact on the quality of education. The traditional system of learning, where both teacher and student are in a particular classroom at a particular time, had to be transformed in a short period of time and required a new view of the learning system, taking into account its national specificity. This force majeure situation has made it necessary for many universities to address many of the issues that emerged during this period.

A review of the literature on the problem under study identified the range of issues that most attracted the attention of researchers. For example, there is a discussion about the terminology used: distance learning, e-learning, online learning, hybrid learning, blended learning, TEL (technology enhanced learning), WSCL (web-supported collaborative learning), WBT (web-based training), virtual learning, etc. (Masson et al., 2008; Moore et al., 2011; Tayebnik et al., 2013; Nachmias et al., R., 2000; Daniela et al., 2017). One of the most debated questions has been whether distance learning can be considered an alternative to the existing traditional form of learning in general and whether it will replace the teacher (Soloviev, 2015; Atieku-Boateng, 2021).

As a brief review of the scientific literature has shown, the current definitions do not provide a clear answer about the differences between the terms “distance learning”, “online learning”, “e-learning”. Some scholars see them as interchangeable (Arafah, 2004; Stupin, 2012), while others attempt to define each of the concepts appropriately and identify signif-

ificant differences between them (Moore, 2011; Kusaeva, 2021; Tochilina, 2020). For the most part, researchers agree that online learning is a type of distance learning implemented through distance technologies. At the same time, “distance learning in the modern sense, is a purposeful process of interactive interaction of students and trainees with each other and with the means of learning, invariant (indifferent) to their location in space and time, which is implemented in a specific didactic system” (Andreev, 1996). This format reflects all the processes inherent in the traditional form of learning. And an online lesson is “a learning activity included in the curriculum and timetable, conducted in a virtual classroom and based on audio-video explanation and teacher’s comments, which are based on the use of visual learning materials, productive ways of interaction of subjects of the educational process, consideration of the ratio of learning materials and practical tasks in real time” (Rybicheva, 2018: 20). In other words, online education complements distance education.

And yet, most of the numerous studies in the field of educational technology are devoted to the issue of the quality of e-learning compared to traditional education. There is no consensus here. For example, according to a study on the use of e-learning technologies in education by European universities, which was conducted by the European University Association, about half of the respondents (38 European educational organizations took part in the survey, which is about 1/3 of the total European higher education space), believe that e-learning does not improve the quality of education or are not sure about it (Research: E-learning in European Universities, 2015).

Our analysis of the presented theoretical works allowed us to identify a number of important points that require special attention in the transition from the existing traditional system to new forms and methods characteristic of online learning. It should be noted that all of them are interrelated. To name the main ones:

1. The psychological aspect. This refers to the moral, emotional, physical effort, and ethical problems that accompany the online learning process (Valieva, et al., 2020;

Sokolovskaia, 2020; Gomez et al., 2020; Qandil et al., 2020). As Bozkurt, “Despite the growing awareness of the ethical side of educational technology, especially after 2015, for a long-time ethics was only an afterthought. There is now an urgent need to further develop the field of educational technology research and ethics” (Bozkurt, 2020).

2. The financial issues are important because creating the conditions for a successful transformation of the education system depends on the economic component. (Al-Samarrai, 2020; Tabarrok, 2012; Fernandes, 2020; Pollock et al, 2020).

3. A significant factor is the administrative policy of the educational institution. New knowledge and skills in modern technologies have become necessary to work in a distance format on various digital platforms: as a consequence, the number of users using online learning resources has increased tenfold, and the administration of universities has faced the challenge of organizing this process (Hammond et al., 2018).

4. Technical basis. Online technology, internet and computers have penetrated all walks of life and have become the catalyst for the digital knowledge era (Hussain, 2012; Ndukwe et al., 2020; Sengupta, 2022).

5. Pedagogical component. Teachers are faced with the need to review teaching and learning methods, make significant changes in curricula, change the structure of lectures and practical classes, develop new types of tasks and ways of transferring information, etc. (Harangus et al., 2021; Deem et al., 2020).

An important factor for a deeper and more objective understanding of the degree of impact of the changes on the direct participants of training (students and teachers) was the research on student and teacher satisfaction with the new format of training. Large-scale (involving universities of several countries) (World Bank, 2020) and local (at the level of several universities of one country or one university) (Karadag et al., 2021; Gil, 2021; Nikou, 2022; Szopiński et al, 2021; Danchikov, 2021) sociological studies were conducted.

For example, more than 11,000 students and 400 education professionals took part in a



survey conducted by the global rating agency QS in 2020. The results revealed the level of negative impact of the pandemic on education systems around the world (Al-Samarrai, 2020). According to this study, students' attitudes towards distance education have also changed. As of 26 March 2020, 58 % of international students surveyed expressed an interest in distance learning due to the restrictions caused by the coronavirus, while only 42 % stated that they were not interested in learning online. In addition, 51 % of students surveyed stated that they expected universities to move their classes to an online environment as a forced measure while dealing with the coronavirus infection (Al-Samarrai, 2020).

When examining student and teacher satisfaction with online learning, researchers look at the degree of teacher training and the technical equipment of a country's university in relation to its national context. For example, Turkey (Karadag et al, 2021), China (Bao, 2020); Russia (Danchikov et al, 2021), Spain (Gil, 2022), Poland (Szopiński et al, 2021), India (Gopal et al, 2021), etc. Almost all of the papers deal with similar problems related to: adaptation of students and teachers to work online; inconsistency of distance learning with educational standards; low level of student satisfaction with the cost of education; changing the role of the teacher in the learning process; low level of digital literacy of teachers; choice of distance learning platforms by universities; students' demotivation to study; dissatisfaction with the chosen specialty and fear of future. Of course, every study dedicated to these problems must take into account that the degree of difficulty of the transition to a new format of training varied depending on many factors: the scale of the university's activity, the level of its financing, the development of information infrastructure, the availability of electronic educational resources, teachers' digital competence and, consequently, their readiness to use information technologies in the educational process, and so on.

Despite the emergence of a large number of publications devoted to these problems, we believe that further research is required to more

deeply and objectively address the issue of the effectiveness of this or that form of education. Conducting an assessment of student and teacher satisfaction on a regular basis will allow us to see an objective picture and understand the degree of effectiveness of online education compared to face-to-face or mixed (hybrid) education. And multidimensional and large-scale work based on a comparative analysis of the experience of online education in different universities in a pandemic environment, taking into account the current economic situation in a particular country, the policies in place, the availability of administrative and educational resources and much more, will provide answers to many other questions facing the higher education system. We believe that our study also contributes to the discussion and understanding of the challenges faced by the university and to the development of a more thoughtful, focused and effective action going forward.

## Methods

During the research the authors of the article applied analysis and synthesis of scientific literature on the topic of research, processing and interpretation of the obtained information and questionnaire survey. Authors considered Kazakhstani and foreign experience in the organization of training sessions and identified the difficulties encountered by universities in different countries.

The main instrument of the study was an online questionnaire survey of students, conducted at the L. N. Gumilyov Eurasian National University. During the experiment, a spontaneous sample of respondents enrolled in various undergraduate and graduate programmes in the humanities, economics and natural sciences was used. The representative sample consisted of 229 people: 105–3<sup>rd</sup> year students (45.85 %) and 101–4<sup>th</sup> year students (44.10 %) and 23 – undergraduate students (10.04 %) who studied via distance learning. We deliberately did not involve first-year students as we believe that they had not yet had enough experience in university education at the time of the study to compare and identify the advantages and disadvantages of different forms of learning.

The questions of the questionnaire are in three languages – Kazakh, Russian and English, so students had the right to choose the language of the questionnaire.

This is due to the fact that education in Kazakhstan is conducted in accordance with the country's policy of trilingualism<sup>1</sup>.

For the qualitative analysis of the data, closed-type questions were developed and offered, when the answer consists of selecting one or more statements offered in the questionnaire (71) and open-type questions, implying a free response (23). The results were processed in Excel, which presented them as a percentage distribution of the data. The data were also processed using the Statistical Package for the Social Sciences/SPSS 20.0. The questionnaire was created using Microsoft forms, distributed via corporate email, social media. Participation in the survey was voluntary and the answers to the questions were anonymous.

In order to achieve its purpose, the questionnaire was conventionally divided into 3 parts. The first block of questions was aimed at obtaining general information and related to the socio-demographic characteristics of students: age, gender, nationality, financial status, marital status, etc. Thus, the age of respondents is represented by a range from 18 to 24 years old: 88.20 % from 18 to 21 years old and 11, 80 % from 22 to 24 years old. The gender distribution of students is as follows: 37.11 % are males and 62.89 % are females. Nationality breakdown is as follows: 94.32 % – Kazakhs,

2.18 % – Russians, 1.31 % – Uzbeks, 0.43 % – Tatars and Turks respectively, and 1.33 % – other nationalities. 94.32 % are single, 29.69 % have many children (4 and more), and 2.62 % have children. Most participants (76.85 %) live in the care of their parents and are unemployed, 9.6 % live with one of their parents. The description of the students shows that the sample of this study is representative enough and some of the conclusions obtained are applicable not only to the whole L.N. Gumilyov ENU, but also to the situation in Kazakhstan as a whole.

Problems related to students' perception of the online format are also psychologically oriented. Therefore, a number of questions were aimed at identifying the emotional state of students in an online learning environment. The questions of the third group of questions were aimed at students' assessment of the effectiveness of online learning and referred to different aspects of the educational situation (learning load, organization of feedback from the teacher, self-study opportunities, etc.).

It should be noted that the study was not conducted at the initial stage of quarantine measures, by this time the difficult adaptation period of transition to distance learning format was to some extent overcome and the students did not experience high psycho-emotional stress in the learning process.

### Digitalization in Kazakhstan

At the beginning of the XXI century Kazakhstan, like the entire world community, entered a new era – the era of information. Digitalization, which has affected almost all spheres of human activity, has become an important trend in the development of modern states. The educational environment has become one of the trends. Within the framework of the state programme "Digital Kazakhstan", adopted in December 2017<sup>2</sup>, the creation of a digital educational environment and the popularization and practical development of new electronic educational products were also the starting points.

<sup>1</sup> In 2006, Kazakhstan began the step-by-step implementation of the ambitious "Trilingualism" project, which involves the mass acquisition by citizens of the country of three languages, Kazakh as the state language, Russian as the language of international communication, and English as the language of integration into the global world. Its implementation was carried out in accordance with the "Roadmap for the development of trilingual education for 2015–2020". The proposed trilingualism is seen as a significant factor in strengthening social harmony in the context that the preservation of other national languages and cultures is a state task. The transition to trilingualism is not an easy, step-by-step task, and is most noticeably carried out in the academic environment, in education. Education in Kazakhstan must become competitive and of high quality, creating the opportunity for graduates of Kazakhstani schools to continue their studies in foreign universities. Tory language is considered as one of the basic competences, along with Eurasian multiculturalism, communicativeness and technocratism.

<sup>2</sup> State program "Digital Kazakhstan". Decree of the Government of the Republic of Kazakhstan No. 827 of December 12, 2017 – <https://zerde.gov.kz/activity/management-programs/the-state-program-digital-kazakhstan/>

It must be admitted that in Kazakhstan's education system, the distance learning format is only now undergoing a phase of assimilation. There are a number of significant factors that affect its thorough introduction into the system of higher education: the prevalence of Internet communication throughout the country, the educational policy of universities, of course, the economic and political situation in the country and others (Cherniavskaia, V.E. et al. 2019). Now Kazakhstan is in 50<sup>th</sup> place in the world in terms of digital development, with basic digital literacy in Kazakhstan at 77 %.

Despite all the difficulties, primarily of an economic and organizational nature (problems with technical equipment, unequal access to the Internet in different regions of the country, the lack of qualified professionals, etc.) the efforts of the state have been focused primarily on improving the e-learning platform: the organization of open access lectures and seminars for teachers, creation of virtual laboratories for engineering courses, creation of electronic interactive multimedia educational materials, digitalization of library collections, etc., as well as the development and implementation of the e-Learning platform. The National Platform for Open Education of Kazakhstan has been developed and implemented, which is a hardware and software complex consisting of distance learning systems, teleconferences and webinars, educational courses, online lessons complex, object-oriented programming, robotics, 3D-modelling and printing, remote exams and examinations.

The different educational platforms were used during the pandemic at the L. N. Gumilyov ENU. The university, like many other universities in Kazakhstan, used different educational platforms during the pandemic: first the Zoom platform was launched, then it was decided that online learning on Microsoft Teams and Webex platforms was needed. Even before the pandemic, the university had introduced well-known software products such as Moodle to work with students, which they had successfully adapted to teach students in a distance learning format. However, the forced transition to online learning exposed many problems. It was necessary to understand which of the existing educational

platforms were the most convenient and effective, how to master new types of classes, how to properly distribute time, how to objectively assess students' work and much more. A series of training webinars for teaching staff to work on this platform was organized at the university as soon as possible. Massive open online courses with lectures by university professors began to be widely used: during the pandemic their number increased from 700 to 2,000 and the number of trainees from 400 to 14,000. The scientific library has strengthened its information services to support the educational and research activities of the university and provides almost the entire range of services in digital format. This prompt response of the university administration to the unexpected challenge has undoubtedly contributed to faster adaptation of teachers and students to the new educational technologies in the context of the pandemic.

## Results

In accordance with the research objectives, we turned to such an important aspect of online education as the students' attitude as participants in the educational process to the transition to a distance learning format. The analysis of students' opinions on the organization and implementation of online learning, the identification of the difficulties encountered by students provides an opportunity to see the prospects of digital environment development in the context of widespread transition to online learning format.

The study involved analysis and synthesis of scientific literature on the topic of study, processing and interpretation of the information obtained, questionnaire survey and interviewing.

The first set of questions, in addition to the data presented in the Methodology and research methods section, included questions aimed at finding out the technical capabilities of the available learning devices, as well as the quality of the Internet connection. It should be noted that the students feel quite confident from a technical point of view and do not experience significant inconvenience. Internet access was available to an absolute majority of respondents – 95.63 %, and 82.095 % were



quite satisfied with the speed of the Internet connection. Fig. 1 shows that students mostly use smartphones and laptops (48.47 % and 44.10 % respectively) to complete assignments that are given for self-study. 7.42 % use tablet and computer. The vast majority (92.13 %) have the necessary camera, microphone and headphones for using in the learning process, 87.32 % of the respondents have no problems with downloading the required software, 78.60 % of students have technical devices fairly new (from 1 to 3 years). Only 2.62 % of respondents reported no technical devices. However, it is worth noting that every third respondent (34.49 %) shares their device with others. It is quite obvious that not every family can provide their children (and themselves) with several laptops or computers.

The responses regarding the technological tools used for teaching showed that students primarily appreciated the educational capabilities of Microsoft Teams providers (41.04 %) and Zoom (32.75 %), which have already established themselves as affordable and effective educational technologies: they provide ample opportunities for the presentation of lecture and practical material, allow real-time dialogue with a camera on, audio link, demonstration of their screen (or a separate window, part of the screen, etc.), have the possibility of the use of the Internet. Thus, they enable effective interaction between teachers and students in virtual classrooms. According to Fig. 2, the remaining applications are distributed as follows: 41 % – Microsoft Teams, 32.7 % – Zoom, 11.35 % – WhatsApp, 10.04 % – Google Meets,

2.18 % – Moodle, 2.18 % – Youtube and Instagram, Skype – 0.87 %.

Turning to the analysis of students' psycho-emotional state, it should be noted first of all that the vast majority of students are socially active. 89.5 % actively communicate with their classmates, 72.05 % of the survey participants feel themselves as members of the university community, make new acquaintances (69.86 %).

However, 25.73 % of respondents experienced some stressful situations at home, 9.13 % noted pressure from family members, explaining this by a mismatch of views on life, tiredness from home affairs, constant control from relatives and problems of inner discomfort.

To the question "Do you have a study room" 39.42 % responded that they did not have one (it is possible that it is connected with the fact that some students live in the dormitory), therefore they have to study in the kitchen, in the hall and even on the balcony, 10.18 % can prepare for classes only in the library. Among factors distracting students from studies the following were mentioned: household chores (cooking, cleaning, shopping, meal time), this was mentioned by 46.46 %; 13.33 % mentioned guests, 9.89 % mentioned noise from children, 9.25 % mentioned noise from TV and radio). This indicates that the home environment is not always conducive to concentrating on important issues related to the acquisition of important information and the acquisition of new knowledge and skills.

Negative emotions were also associated with problems encountered during the online

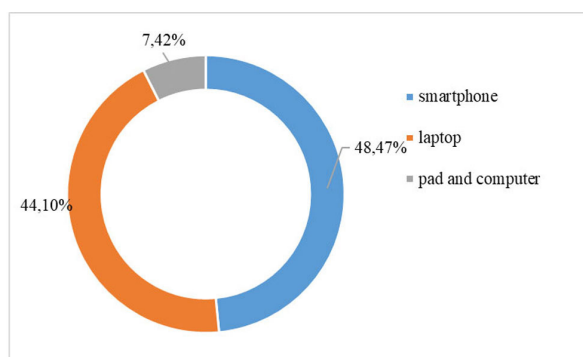


Fig. 1. Provision of technical devices

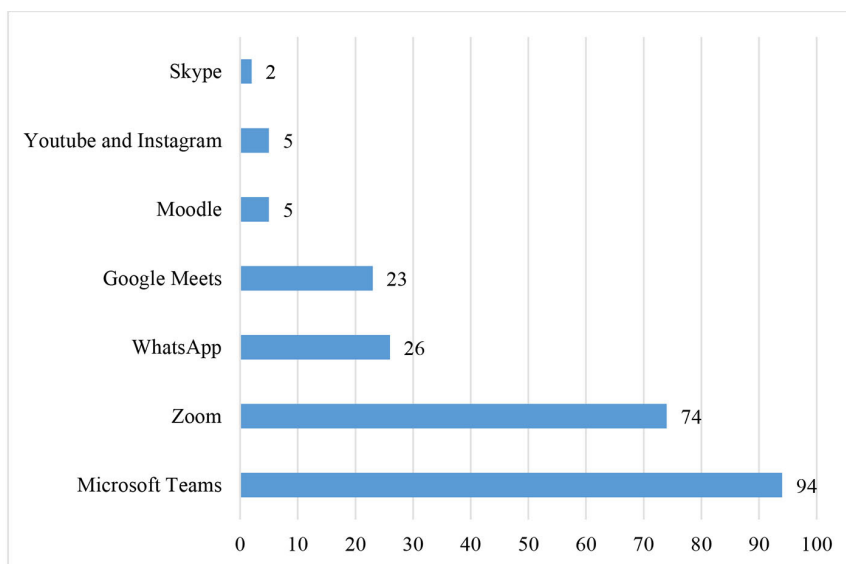


Fig. 2. Technological tools used for training, number of respondents

classes: 63.45 % of the respondents had some worries about technical problems during the classes, which were caused by weak internet, insufficient speed, video and microphone malfunction and overheating of the laptop due to the load. Poor sound quality in recorded lectures was also noted at 3.73 %. Almost every third respondent (36.99 %) needed additional technical help. At the same time, a significant majority of respondents get support from family (parents (31.51 %) and siblings (15.07 %) and friends (37.44 %), and then from IT staff (14.61 %).

The emotional state of students may also be connected with an increase in the study load: 41.04 % of respondents noted an increase in the weekly study load, approximately the same number (40.61 %) did not feel it, and 18.35 % found it difficult to answer. An increase of 100 % for 11 students (6.04 %), an increase of 80 % for 22 students (12.09 %) and 50 % for 56 students (30.77 %). Students in the interviews noted an increase in the volume of assignments, which led to the need to spend more time and effort to prepare for seminars and to do assignments for independent work.

It is quite obvious that the above-mentioned emotional manifestations in students are an unfavorable factor affecting their mental activity

and reflect the unpreparedness of students to perceive and implement active forms and methods of interaction with the teacher.

The block of questions aimed at identifying the evaluation of the effectiveness of online learning showed the following results.

The level of satisfaction of the study participants with online learning was quite ambiguous. Online learning, according to the respondents, has a number of obvious advantages. The study showed that, according to students, the online learning mode is convenient, flexible as it allows studying at night or early in the morning, economical, easy to participate, gives the opportunity to know their pace, the ability to get instant feedback, and fits the learning style (Fig. 3).

Nevertheless, according to the findings, one in two respondents (50.65 %) believe that online learning is less informative than offline learning. About the same number of respondents (48.03 %) hold the opposite opinion (Fig. 4).

At the same time, a significant part of the respondents (60.69 %) notes that the productivity of learning activities has not decreased, in fact, 55.02 % of the respondents indicated that it has increased.

Undoubtedly, the process of interaction between the participants of online learning –

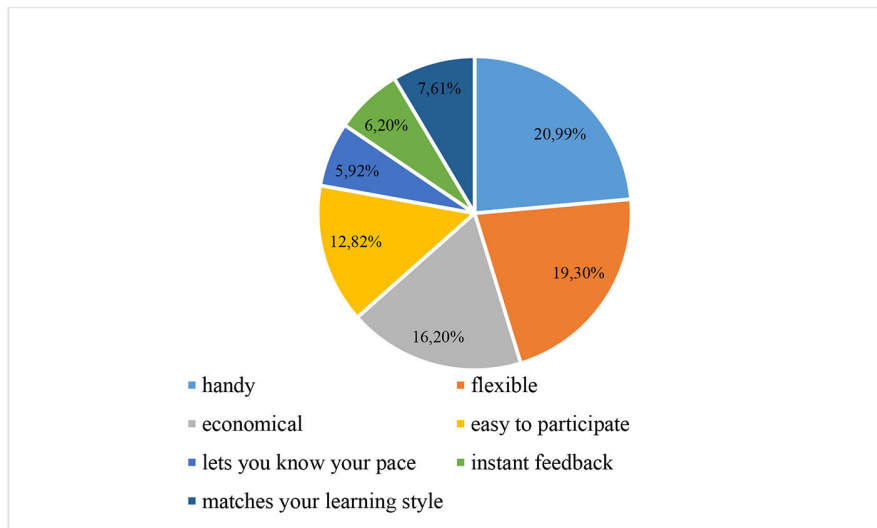


Fig. 3. Benefits of online learning, percent

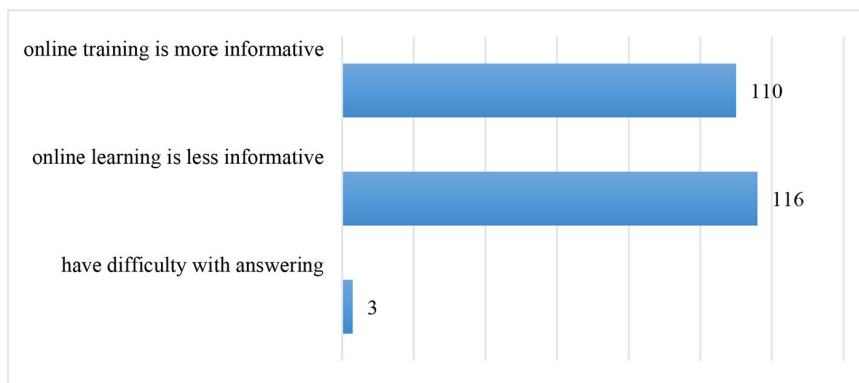


Fig. 4. Informative of online learning, number of respondents

teachers and students – is of great importance for the organization of work in the distance learning mode. Thus, the number of respondents communicating with an instructor outside of academic hours was 43.39 %, a little more than half of the respondents (56.61 %) answered this question negatively. Moreover, a third of the respondents (29.26 %) have some difficulties communicating with teachers during online learning sessions, 7.45 % are not satisfied with the feedback. Undoubtedly, such answers indicate the need to pay special attention to improving the process of organizing feedback from the teacher to enable students to get answers to their questions.

The results of the distribution of responses about the shortcomings of online learning are distributed as follows (Fig. 5):

Technical problems ranked first (24.23 %), unstable internet connection and decreased social interaction were second (15.78 % each), while difficulties with feedback (asking/receiving a question) ranked third (10.51 %) and motivation (10.46 %). 6.88 % of students say they have difficulty concentrating in a lecture and retain information – 6.14 %. Some are not satisfied with the quality of the material provided electronically: large recorded lectures (4.85 %), poor quality of recordings (4.70 %) and difficulty in staying focused (4.56 %). In addition,

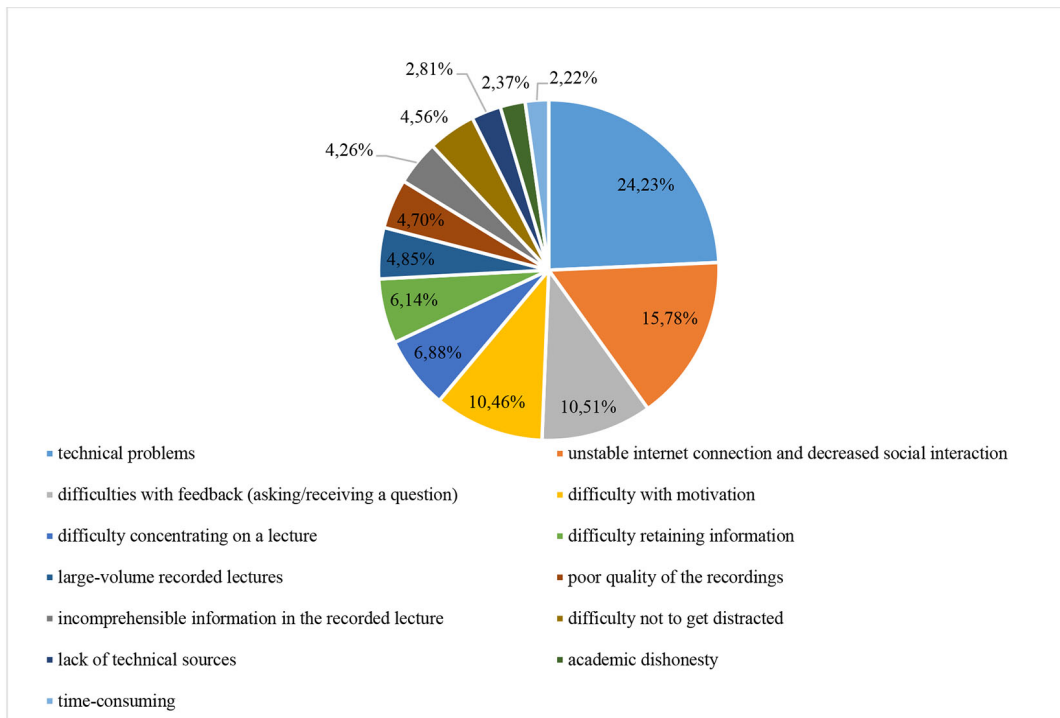


Fig. 5. Disadvantages of online learning, percent

(4.26 %) the information in the recorded lecture is not clear. In the last place are answers about “lack of technical sources” (2.81 %), “academic dishonesty” (2.37 %) and “time-consuming” (2.22 %).

In general, respondents have a positive attitude towards online learning: to the question “Do you like online courses?” most respondents (74.68 %) answered affirmatively, 25.32 % gave a negative answer. However, only 49.78 % of respondents were positive about the effectiveness of such training, more than half (50.22 %) were of the opposite opinion. Hence, there is roughly the same ratio between those who want to continue online learning in the future and those who prefer the traditional learning format – 51.98 % and 48.02 % (Fig. 6).

As we can see, positive and negative evaluations of online learning are distributed almost equally. It can be assumed that despite the rapidly growing popularity of online learning around the world, not all students at the time of the survey had little experience of such learning and with the introduction of this

form they had to adapt to the new conditions of knowledge acquisition. Only just over half of those surveyed (56.62 %) said that they had previously organized online meetings of family or friends.

Answers to the question about preferences between online learning and classroom work are also consistent with the above results: 51.97 % of respondents chose online learning. Clearly, this includes the category of students who had uninterrupted access to the Internet, received assignments from teachers on time, and had the option of online consultations. For the other half of the surveyed students (48.03 %) the classroom form of the learning process is more familiar and convenient. In verbal discussions of these issues, the respondents noted that direct contact with the teacher creates a learning environment in which information is perceived better and the learning of material is more productive, the possibility of direct contact with the teacher gives quick feedback. It is important for students to see the teacher’s reaction to their statements, to feel their interest

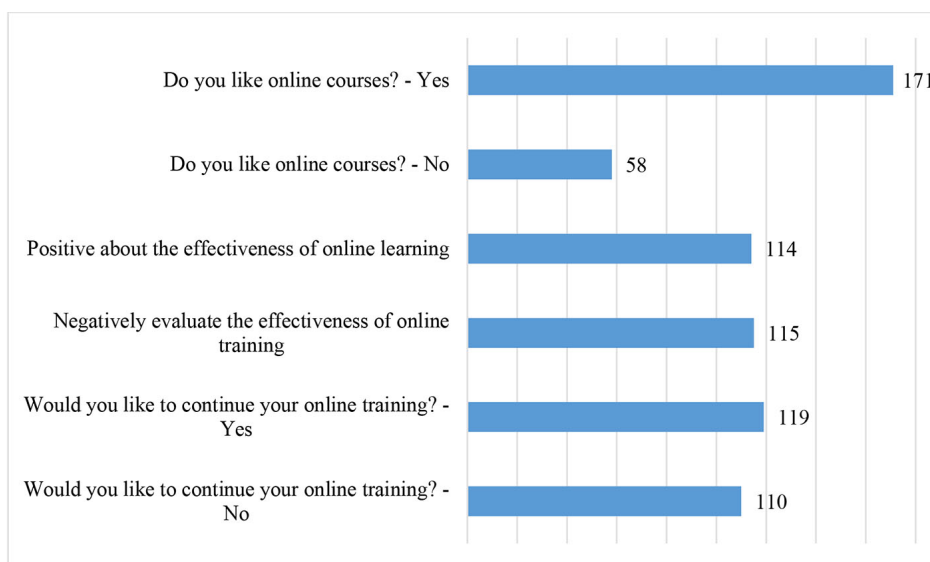


Fig. 6. Respondents' attitudes toward online learning, number of respondents

and live energy, which is only possible during face-to-face meetings. After all, often the online format includes once-recorded webinars and involves neither communication nor eye contact between the teacher and the student. And live communication influences the level of student involvement in the educational process and thus leads to an increase in the amount of knowledge acquired. On the other hand, it cannot be overlooked that the negative attitude towards such a change can also be attributed to the insufficient level of techniques used by teachers in online learning.

At the same time, it should be noted that, on the whole, students appreciated the work of the teaching staff during the online training period quite highly. 86.90 % of the respondents felt that the amount of material offered by the lecturers was sufficient for successful learning of the subject.

### Discussion

The educational system in Kazakhstan has undergone serious changes due to the coronavirus pandemic (COVID-19): educational goals, forms and methods of teaching, approaches for using innovative technologies, etc. have all changed. Online learning required new efforts aimed at the creation (improvement) of digital

technologies, formation of new skills and competencies of both students and teachers. In this regard, the need to revise the attitude of participants in the educational process to the existing system and forms of learning becomes clear.

The study has clarified students' attitudes towards online learning in terms of its effectiveness, convenience, technical capabilities, organization and quality of learning with educational content (completeness of the materials required for learning, content of the courses presented and quality of the educational content). Undoubtedly, students' viewpoints, as well as those of teachers, are important for the further improvement of the education system. It provides an opportunity to understand what are the priority tasks that universities need to address. Students' opinion plays an important role in preparing new educational programmes, improving university educational services, and thus in shaping the status of the university and its place in the world rankings.

The comparison of the results of the conducted survey with the data obtained on the basis of analysis of the studied literature on the considered problem showed that the identified problems are relevant for both Kazakhstani and foreign higher education institutions. Undoubtedly, the opportunity to



have multiple access to available information, to independently plan the learning process, to manage their own time, to save time on movements make the possibility of obtaining knowledge more accessible. However, the insufficient development of the information and communication infrastructure, the insufficient number of highly qualified specialists in this field, the weak self-discipline and motivation of students, and the poor mastery of computer technology by teachers are significant obstacles to the effective implementation of this form of learning. Nevertheless, one thing is clear – in today's conditions of life, distance learning is becoming extremely popular.

The data we have obtained as well as comparative analysis of research results carried out by foreign and Kazakh researchers testify, most likely, to the fact that today we should not speak about complete replacement of traditional education with its digital analogue: the most acceptable, convenient and effective is gradual, step-by-step transition to a hybrid (blended, blended learning) model, which involves a harmonious combination of different forms and methods – traditional with elements of distance (synchronous and asynchronous online) learning.

In particular, Jowsey, T., Foster, G., et al. note that «blended learning can and does have a positive impact on student achievement, especially when it is used to manage and support distance learning. On the international education arena, there are noticeable positive trends towards blended learning in large higher education institutions (Jowsey, T. et al, 2020).

Still, we believe that online learning cannot fully replace traditional forms, where the role of the teacher is significant and is a priority in modern realities: a reasonable combination of forms, methods and tools of traditional (“face-to-face”) and virtual, remote interaction of the educational process participants will allow achieving the necessary quality of the educational process.

## Conclusion

Based on the results of a survey conducted among the students of one of Kazakhstan's leading universities – L. N. Gumilyov Eurasian

National University – the authors of this article have drawn certain conclusions.

As it turned out, online learning is a serious alternative to traditional learning. The experience during the pandemic has been an impetus for the development and application of new, better forms and methods of learning. The flexibility factor is essential for university learners, as online learning provides the opportunity to study at a convenient time and place. The immediacy of feedback through computer technology gives faster and more productive results in obtaining the necessary knowledge. The availability of a convenient online platform for teacher interaction makes such interaction more successful.

Among the problems pointed out by the students, it is necessary to name, first of all, problems of technical character connected with low speed of the Internet and quality of communication and absence of necessary technical tools (headphones, microphones, good resolution camera). A further barrier to more successful work is, in our view, low self-organization, where much depends on the attitudes and personal development of the learner himself. And another important factor is, of course, the level of teacher training: in their mastery of digital tools, in their ability to use innovative teaching methods, in their clear understanding of how the competencies declared in the syllabuses are formed, in their desire for continuous self-improvement and much more. It is important to have a clear understanding of the following thesis: regardless of the differences in the approaches and tools used by the teachers, it is necessary to organize the interaction of the participants of the educational process with the learning content and with each other in order to achieve the educational goal (Gu, et al., 2021). It is important for modern teachers not only to be able to use technologies but also to do it creatively and methodologically consciously, realizing their possibilities and limitations (Nazarenko, 2005). As well as many other Kazakhstan universities, L. N. Gumilyov ENU needs well thought over programs and methods which development is considered as one of priority problems of modern pedagogics. It is not a secret that the system of the Kazakh-

stan education (as well as many countries of the post-Soviet space), constructed basically on a principle of classroom training, is not adapted yet for independent forms of learning.

As the survey results have shown, providing access to the content of the studied courses has not solved one of the important pedagogical tasks – to determine the real study load of students (to agree the amount of work and its workload, as well as to control it). 92 respondents (40.17 %) said that the weekly workload increased during the semester, 19.21 % found it difficult to answer. It is quite obvious that overloading with self-study material not only demotivates students, but also causes rejection.

It is clear that this is a great responsibility, requiring considerable effort on the part of all participants in the educational process, their joint solution of the tasks set for the education system. After all, successful results are achieved only when several factors interact, such as pedagogical design, learning context, technologies used (digital and pedagogical) (Means et al., 2014).

At the heart of online learning, notes N. Kiyasov, is a carefully designed and planned learning process supported by a methodologically sound and purposeful sequence of teaching and learning and test materials that en-

sure the achievement of learning outcomes in an exclusively e-learning format» (Kiyasov, 2020). Therefore, detailed and methodologically sound use of synchronous and asynchronous ways of interaction between teachers and students, competently structured recording by teachers of classes conducted online, creation of electronic educational and methodological support for the course, electronic materials of each class will allow ensuring the participation of all students in the educational process.

The results of our study provide an opportunity to coordinate the educational policy of the university, draw conclusions and make appropriate decisions to improve the education system in order to improve its quality. There is no doubt that the market of distance education services will expand regardless of whether or not the COVID-19 pandemic ends. We believe that a gradual transition to blended learning, in which different forms of learning (online and offline) will be thoughtfully, harmoniously combined, is advisable. The importance of the role of the teacher in the student audience has been and remains high.

We believe that further multidimensional study of current online learning processes and its impact on the formation of professional competences is necessary.

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