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Challenges for scientific and pedagogical staff of universities after pandemia 2019

Desafíos para el personal científico y pedagógico de las universidades después de la pandemia 2019

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Abstract

Nowadays situation at the universities in Ukraine and all other countries round the world are faceted with different challenges almost every new quarter of the year. The very vivid example of it was the pandemic period, which determined transforming of forms of education and different approaches to education. Moreover, the Pandemia provoke the huge wave of challenges for scientific and pedagogical staff of universities. A great number of changes took place at the system of educational process organization: pandemic has exacerbated the need for digital, technology-enabled education experiences, new types of online-classes appared and new ways to scale them etc. But after pandemic period and all these transmitions in universities their appared the need for analyses of challenges which we are going to face with, when we come back to ordinary style of teaching? what problems are we going to solve? To answer these questions, we created a Questionnaire for teaching staff and students of different Universities in Ukraine in different regions. We asked them to give their feedbacks, opinions and feelings of the quarantine restrictions of COVID-19, what difficulties they had durining the next few months. The investigation helped to distinguish challenges to scientific and pedagogical staff of higher educational institutions, the nature of which is the peculiarities of the professional activities of teachers and challenges to the scientific and pedagogical staff of higher educational institutions, the nature of which are the features of the educational activities of students.

Keywords: Pandemic, scientific and pedagogical staff, higher education, challenges to university education.

Resumen

Hoy en día, la situación en las universidades de Ucrania y todos los demás países del mundo se enfrenta a diferentes desafíos casi cada nuevo trimestre del año. El ejemplo muy vívido de ello fue el período de la pandemia, que determinó la transformación de las formas de educación y los diferentes enfoques de la educación. Además, la Pandemia provoca la enorme ola de desafíos para el personal científico y pedagógico de las universidades. Se produjo una gran cantidad de cambios en el sistema de organización del proceso educativo: la pandemia ha exacerbado la necesidad de experiencias educativas digitales habilitadas por la tecnología, aparecieron nuevos tipos de clases en línea y nuevas formas de escalarlas, etc. ¿Pero después del período de pandemia y todas estas transmisiones en las universidades han hecho aparecer la necesidad de análisis de los desafíos a los que nos vamos a enfrentar, cuando volvamos al estilo ordinario de enseñanza? ¿Qué problemas vamos a resolver? Para responder a estas preguntas, creamos un cuestionario para el personal docente y los estudiantes de diferentes universidades de Ucrania en diferentes regiones. Les pedimos que den sus comentarios, opiniones y sentimientos sobre las restricciones de cuarentena de COVID-19, qué dificultades tuvieron durante los próximos meses. La investigación ayudó a distinguir los desafíos para el personal científico y pedagógico de las instituciones de educación superior, cuya naturaleza son las peculiaridades de las actividades

profesionales de los docentes y los desafíos para el personal científico y pedagógico de las instituciones de educación superior, cuya naturaleza son las características de las actividades educativas de los estudiantes.

Palabras clave: Pandemia, personal científico y pedagógico, educación superior, desafíos de la formación universitaria.

1. Introduction

The Covid-19 pandemic has posed significant challenges to the higher education community around the world. A special challenge for the higher education systems of different regions was the urgent and forced transition from full-time to distance learning, development and implementation of university online courses. The urgent imperative of “going online” caused by the Covid-19 pandemic (World Health Organization, (n. d.)) only added to the stress and psychological, pedagogical and physical strain felt by faculty and staff at the University, which according to Houston, Meyer, Beer and Veletianos (Houston, Meyer and Paewai, 2006) and before the pandemic tried to balance teaching, research and service responsibilities, not to mention the work-life balance.

The affected universities and institutions of higher learning, both public and private, had to look for the best alternative to ensure that teaching and coaching could continue uninterrupted, and online learning was the only route found suitable. Several crucial factors in implementing online learning also needed to be taken into consideration by management of these institutions, such as internet accessibility, speed, and time constraints faced by both educators and students (Yusuf & Ahmad, 2020). Scientific and pedagogical staff of domestic and foreign higher education institutions have faced a number of challenges related to the forced introduction of distance learning, as well as communication at different levels and different agents of the educational environment. However, even after the pandemic, the number of challenges will not decrease, as there will be a problem of reverse, gradual transition of the distance educational process of universities to full-time. Preliminary diagnostics of such calls is one of the means of comfortable return to the "off-line" mode. Actually, the research presented in this monograph is devoted to the definition of new challenges for scientific and pedagogical staff.

Scientific and pedagogical staff of different specialties, ages, status, regions had to prepare and conduct classes at home with all the practical and technical problems that accompany distance learning, and often without proper technical support. Thus, according to recent studies by Ukrainian scientists N. Melnyk, O. Kovtun, S. Hryniuk, I. Rohalska-Yablonska, I. Postolenko and I. Tovkach, among the barriers to the introduction of distance learning were identified: phasing and breadth of distance learning in the educational process, psychological unpreparedness, low methodological readiness to work in conditions of forced social distancing, insufficient competence of ICT (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). After two weeks of quarantine, many universities

have already issued instructions, adopted regulations on distance learning in quarantine, and 30 % of teachers have already worked on various distance learning platforms. One and a half months later, most teachers, including the humanities, already used various video platforms, which showed almost 70% of teachers' adaptation to work in conditions of forced social distance (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). Communication barriers during the pandemic of 2019–2020 turned out to be quite difficult to overcome difficulties, among which, according to a study by O. Kovtun, N. Melnyk, S. Hryniuk and I. Rogalska-Yablonska:

- communication barriers are related to perception through the screen (when the interlocutors show a lack of attention, interest, distraction or irrelevance for the recipient);
- communication barriers are related to differences in perception and point of view, physical disabilities, such as hearing or speech problems, language differences and difficulties in understanding unfamiliar accents;
- communication barriers can be provoked by emotional factors or differences in the cultural development of conversation partners, etc. (Kovtun, Melnyk, Grynyuk, & Rohalska-Yablonska, 2020).

According to research by M. Ocak and Ching (Ocak, 2011; Ching et al., 2018), the main difficulties reported by university teachers regarding web courses arise due to the complexity of the learning situation and shortcomings in planning and organization. The Covid-19 crisis in the foreign educational dimension, as well as in the Ukrainian one, has prompted the development and implementation of many instructions and recommendations aimed at providing methodological support to research and teaching staff of universities and other higher education institutions (Bates, 2020). Much of these recommendations focused on tools and materials that teachers can use to replace face-to-face classes. In addition, teachers were offered hundreds of "hints", mostly without contextualizing the knowledge needed to assess which teaching tactics should take place in a given educational situation, where and how such tactics are likely to work (Rapanta, Botturi, Goodyear, et al., 2020).

However, the diagnosis of challenges to the scientific and pedagogical staff of higher education institutions in the post-pandemic period remains relevant. To this end, a monitoring study was conducted at the leading domestic universities of Ukraine, which included a survey of students and teachers on the status and prospects of online learning, determined the level of satisfaction with the distance learning format of all participants in the educational process.

Analysis of research and monitoring of online learning in Ukrainian and foreign dimensions through research and reports of various universities, organizations shows that most higher education institutions, both domestic and foreign, in the transition to distance learning in a pandemic were guided by those means. Various action plans and activities have been developed, ranging from full-time classes to various forms of blended learning. But what will be the challenges when we all come back to off-line learning? Thus, the

purpose of the article is to present the results of the research, which was dedicated to the problem of distinguishing of these challenges.

2. Methodology and Research

The study of new challenges for scientific and pedagogical staff of higher education institutions in Ukraine was implemented in 3 stages:

1) the first stage is the analysis of scientific research and publications on the problem;
2) development of oral and electronic questionnaires, questionnaires; informing and briefing potential participants in the study; distribution of questionnaires and questionnaires (duration of filling in questionnaires from 1 to 6 months);
3) processing and analysis of the received data;
4) identification of challenges to the scientific and pedagogical staff of higher education institutions in Ukraine analytical justification of ways to overcome them.

It should be noted that the organization of the study included not only an analytical review of scientific papers on the problem of identifying difficulties, barriers and prospects for overcoming them, but also extensive communication with numerous Ukrainian higher education institutions and their involvement in questionnaires and monitoring. Thus, the study covered the following Ukrainian universities and colleges: National Aviation University, Uman State Pedagogical University named after Pavel Tychyna, Municipal Institution of Higher Education “Bar Humanitarian and Pedagogical College named after Mykhailo Hrushevsky”, Sumy State Pedagogical University named after AS Makarenko, Municipal Institution of Higher Education “Uman Humanitarian and Pedagogical College named after Taras Shevchenko”, Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko, East Ukrainian National University named after Volodymyr Dahl, Municipal Institution of Higher Education of Kyiv Regional Council “Bila Tserkva Humanitarian” V. O Sukhomlinsky MNU, Department of Social Work, Pereyaslav-Khmelnytsky State Pedagogical University named after Hryhoriy Skovoroda.

2.1 Research

2.2 Research of features of application of the distance form of training: teaching and student fitbacks

2.3 Profile of respondents

Teachers from ten Ukrainian universities were respondents to the survey. The distribution of responses in these seven universities is presented in Table 1 below.

Table 1.
Distribution of participants.

Institution of higher education	Region of Ukraine	Number of answers
National Aviation University	Northern	120
Uman State Pedagogical University named after Pavel Tychyna	Central	98
Pereyaslav-Khmelnytsky State Pedagogical University named after Hryhoriy Skovoroda	Central	101
Sumy State Pedagogical University named after AS Makarenko	Northern	134
Rivne State University for the Humanities	West	87
Nikolaev National University named after VO Sukhomlinsky	Southern	198
Municipal Institution of Higher Education “Bar Humanitarian and Pedagogical College named after Mykhailo Hrushevsky”	Central	72
Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko	Northern	69
Municipal Institution of Higher Education “Uman Humanitarian and Pedagogical College named after Taras Shevchenko”	Central	54
Volodymyr Dahl East Ukrainian National University	East	95
Municipal Institution of Higher Education of the Kyiv Regional Council “Bila Tserkva Humanitarian and Pedagogical College”	Central	84

According to Table 1, 1125 respondents took part in the survey. Teachers and students of humanities and specializations from all regions of Ukraine answered the survey questions. Respondent teachers were also analyzed for their teaching experience. The results are presented visually in Figure 1.

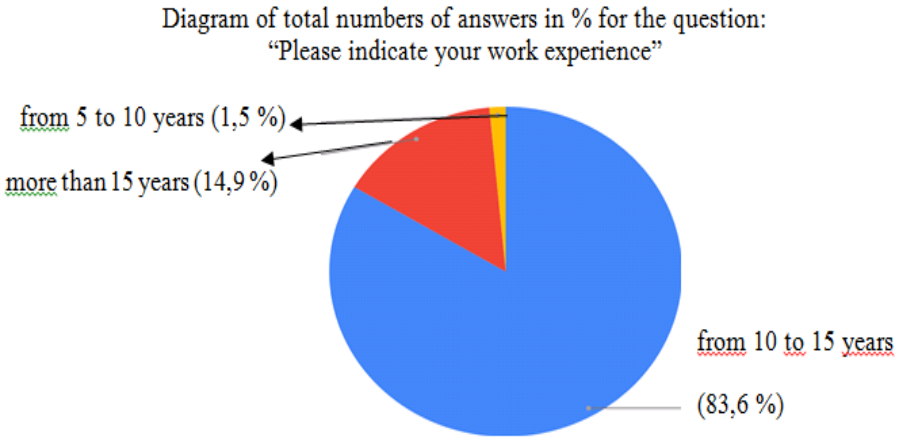


Figure 1. Pedagogical experience of respondents-teachers.
Results are created on the basis of Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

As we see from Figure 1, respondents were mostly experienced teachers, which, on the one hand, allowed them to use their skills in search of innovative ways of learning; however, on the other hand, this may prevent them from being technically competent.

Regarding student respondents, their sample was analyzed from the standpoint of age, which allowed to establish that the study covered 1–5 courses, Diagram 1.

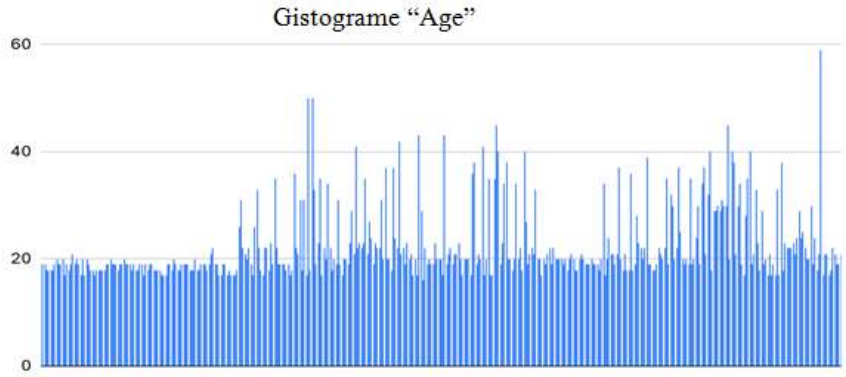


Diagram 1. Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

These charts show that the predominant age of respondents among students is from 17 to 21–22 years. The chart also shows that there were older respondents, which is evidence that both in-patient and part-time students took part in the surveys.

The questionnaires also provided for the gender of the respondents, as gender, according to Sarısakaloğlu, Atay-Avşar and Z. Acar (Sarısakaloğlu, Atay-Avşar, & Acar, 2015), plays a role because of the difference in the use of technology. between teachers and students of women and men. Quantitative data are shown in Figure 2.

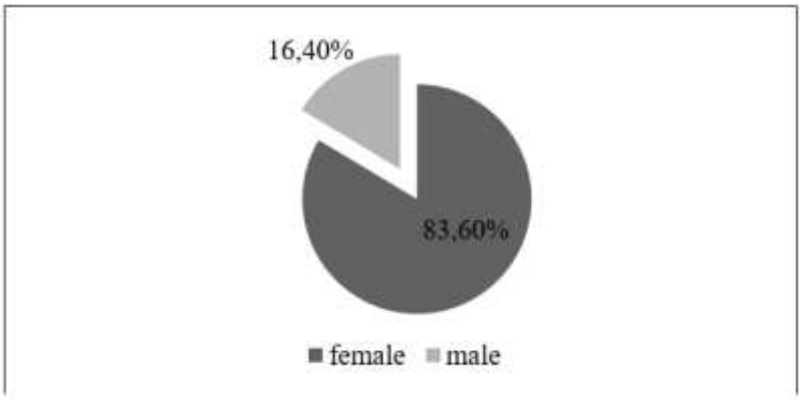


Figure 2. Gender of respondents.
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

These charts show that the majority (83.6 %) of respondents were women (girls). This can be explained from the standpoint of two points. First, women are statistically predominant among teachers and students of humanities universities in Ukraine. Second, Ukrainian men (boys) are less active in surveys, filling out questionnaires, and so on.

In the second stage of the survey, we asked respondents to rank the factors and barriers to adaptation to work in conditions of forced social distancing, we obtained the following results:

1) the most difficult in the process of adaptation were psychological barriers (73 %);
2) the next difficult barriers to the content of the respondents were the use of ICT (20 %);
3) methodical (7 %) was determined as the third most difficult;
4) socio-economic barriers. In this block of the survey, we tried to find out whether Ukrainian humanities teachers were emotionally affected, what anxieties and fears they experienced.

In Figure 3 we can see a number of feelings that respondents felt during the introduction of the first quarantine restrictions.

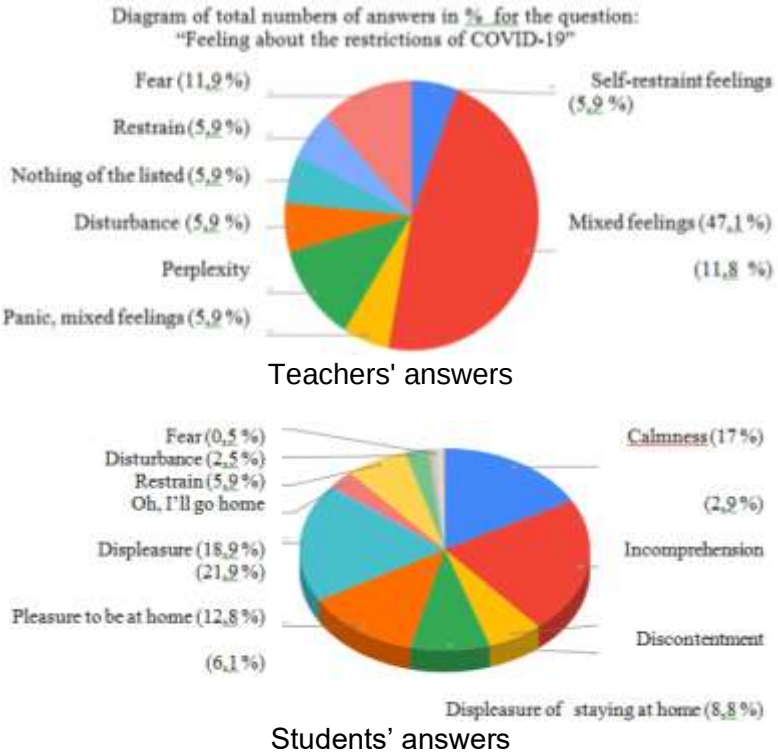


Figure 3. Respondents' feelings of the first quarantine restrictions of COVID-19
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

The data of the diagrams show that the majority of respondents, both lectures and students, had mixed feelings (47.1 %) and dissatisfaction due to misunderstanding of what was happening (21.9), and feelings of dissatisfaction with what they would have to teach and learn. through gadgets (18.9 %). We explain the mixed feelings by the situation of uncertainty and lack of awareness about what will happen next. Feelings of irritability – the fact that both teachers and students are accustomed to the classic forms of interaction and communication, and therefore it was quite uncomfortable to get out of the comfort zone when you had to learn something new and gain new experience in a very fast mode and limited time.

It should also be noted that a fairly high rate of restraint in teachers (almost 18 %), while none of the students did not note such emotion. The presence of a sense of restraint in teachers and the absence of students is explained by age and life experience of overcoming unforeseen situations. Older respondents have more experience in overcoming various life difficulties and situations, most adults have formed critical thinking, and therefore their reactions are characterized by greater balance, which is expressed in restraint (Matiykiv, 2012, pp. 38–39) and stress resistance of the adult. It should be noted that none of the respondents expressed readiness to overcome the difficulties, which is explained by the situation of uncertainty and extremeness (Baeva, 2008), which was inherent in the whole society during the introduction of the first strict quarantine restrictions.

Because the Ukrainian government announced only short-term quarantine in March 2020, many faculty and students attributed this more to a break than to the long-term prospect of online learning. The answers (thoughts, views, expectations and plans for this period) of respondents to the situation were initially different, the most typical are presented in Table 2.

Table 2.
Respondents' responses to the first COVID-19 quarantine restrictions introduced in March 2020.

Emotions	Judgments, attitudes and assessments of respondents	Percentage of respondents teach. / stud
Anxiety, excitement, misunderstanding of what is happening	"What's going on?" "What to expect next?" "And how to catch up with the program?" "How to teach students via phones and computers?"	11,8/9,4
Rejection	"We don't need it!", "Why sit at home?! "	9/0
Mixed feelings	"Nothing special", "And what's so terrible here, let's rest"	47,1/0
Indifference	"It won't last long", "In a few weeks we will return to normal operation (training) "	6/10
Fear	"If such a" strict "quarantine is imposed, it is obviously very dangerous"	11,8/0,5
Panic, frustration, frustration	"Horror…", "How tired of all this talk about the coronavirus, they don't work properly…"	5,9/0
Expectation	"Oh, let's get some rest", "I'll have more time for family", "I'll have a lot of free time with my friends!"	17,6/12,8
Planning other activities	"There will be more time for scientific work!", "Hooray, you can go home"	17,8/12,8

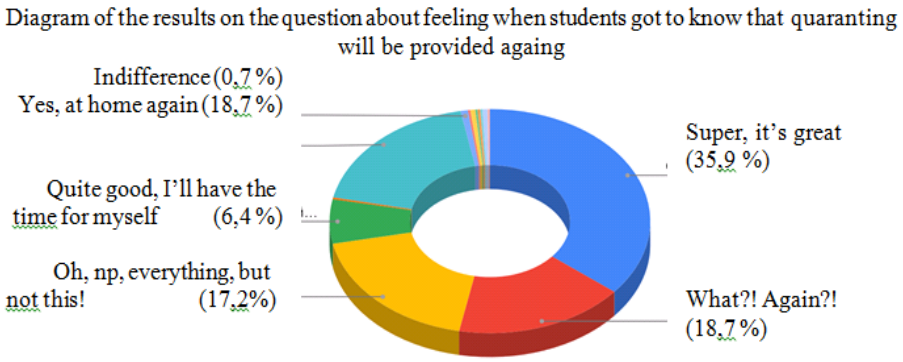
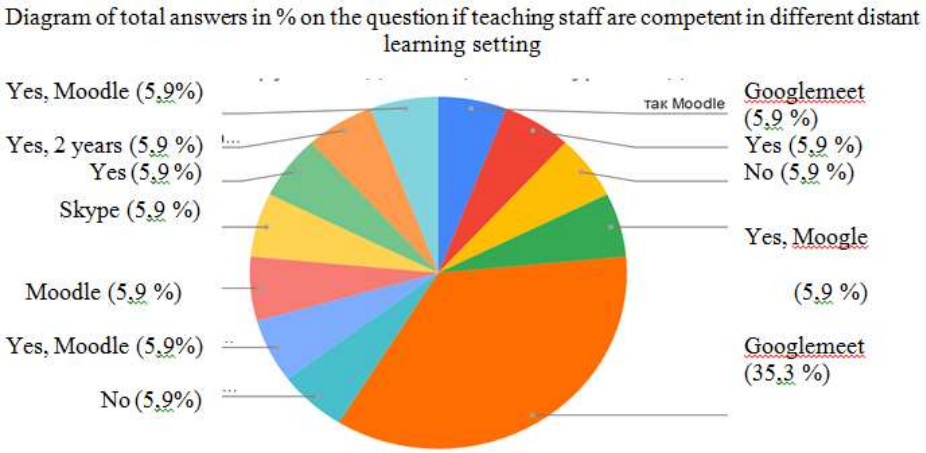


Figure 4. Emotions of respondents during the period of repeated quarantine and return to distance learning.
Results are created on the basis Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

According to the respondents' answers, most of them experienced stress, which manifested itself in emotions of fear, panic, frustration, frustration and mixed feelings (Trigranyan, 1988). At the same time, it is important to note that opposite to the negative emotions there were feelings of joy (12.8 %), positive expectations (23.5 %) and calm (17 %), which are indicators of optimism of respondents (Jacobs, & Carver, 2020). However, in the period from autumn 2020 to early 2021, the opinions, views and plans of respondents acquired a qualitatively new form, which can be traced in Figure 4.

According to Figure 4, the reaction of most respondents during the re-quarantine and return to distance learning was not as emotional as in the first, and therefore dominated by a palette of positive emotions – cheerfulness and joy (35.9 %), optimism (18.7 %) and readiness (6.4 %); emotions of fear, anxiety, frustration and mixed feelings were no more, a very small percentage of respondents did not respond with perception (17.2) and unwillingness (18.7 %) to return to distance learning and social distancing.

The methodical block of questionnaires included determining the state of readiness of teachers to implement distance learning in the conditions of its forced introduction, determining the characteristics of teachers during the period from the beginning of quarantine restrictions and until now through the prism of subjective visions of teachers and students' assessment. they received during distance learning due to quarantine restrictions. Respondent teachers and students initially quarantined experienced methodological incompetence in mastering ICT learning, and the percentage of teachers in this aspect was much higher (35.3 % + 5.9 % = 41.2 %) than students (9.1 % + 0,2 = 9.3 %), as shown in Figure 2. Students had technical difficulties not because of ignorance of the platform, but because of technical problems with communication (43.2 %).



Teaching staff answers

Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

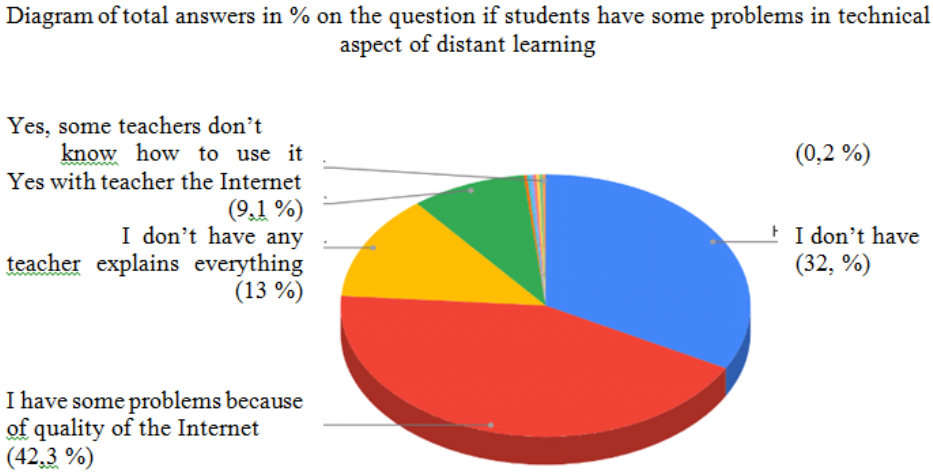


Diagram 2. Results are created on the basis of Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

At the same time, the majority of respondents (52.3 % + 0.5 % = 52.8) positively assessed the actions of educational institutions in which they work or study, regarding the correctness of instruction and the gradual transition from full-time to distance learning of the educational process (Figure 5).

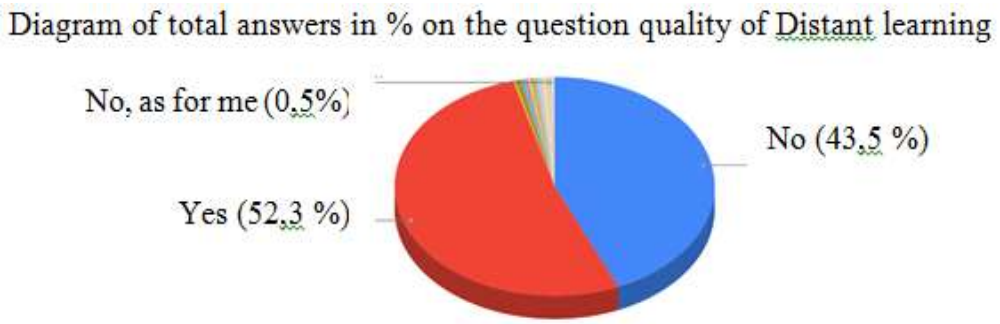


Figure 5. Evaluation of the quality of the organization of the distance form of organization of the educational process in higher education institutions.
Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

Communication with teachers, administration and classmates is also an important component of distance learning (Gillett-Swan, (2017)). The priority for the educational process is undoubtedly communication with the teacher, as it provides an assessment of the quality of the organization of distance learning and services provided by the institution of higher education. The survey on the communicative component in the process of distance learning showed that 52.9 % (32.9 % + 13 %) of respondents among students did not experience any barriers, 43.2 % of barriers are related only to the technical shortcomings of distance learning platforms, the remaining 9.3 % (0.2 % + 9.1 %) of students had barriers due to insufficient training of teachers for methodological support in online learning.

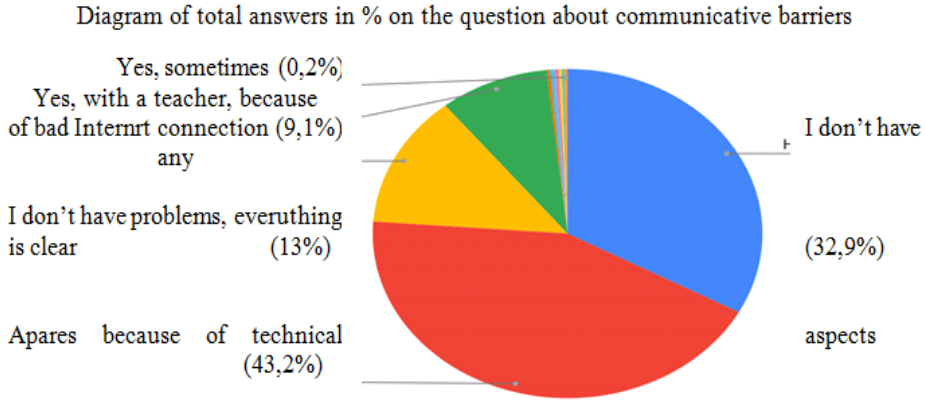


Figure 6. Satisfaction with the communicative aspects of distance learning.
Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

Note that when we conducted the second stage of the survey and questionnaire during the period of re-introduction of quarantine restrictions and at the end of the strict

quarantine in 2021, the answers, attitudes, judgments and assessments of respondents changed. Thus, both teachers and students expressed their positive attitude to the return to the remote format, felt more prepared to work in a social distance and expressed the prospects for further work in the remote format.

At the same time, 33.4 % would like to continue distance learning (28 % said that it is very convenient + 4.9 % believe that distance education is the future of education); categorically against 26.7 %, of which 0.7 % simply would not like a distance format, and 26 % would not like to continue their studies due to the deteriorating level and quality of their knowledge (Figure 7). Among the answers of teachers, the percentage of those who are categorically against permanent or further remote format is much higher – 41.2 % strongly against, others simply do not want – 41.2 %, and only 17.6 expressed readiness to continue working as in quarantine (Figure 8).

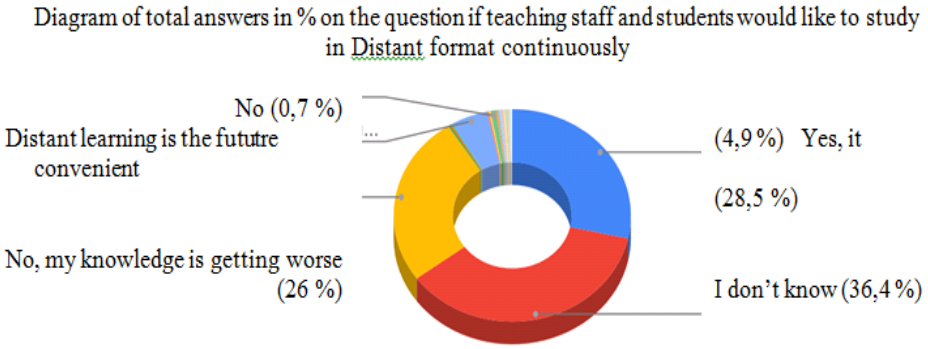


Figure 7. Teachers' answers about the prospects of introducing distance learning.

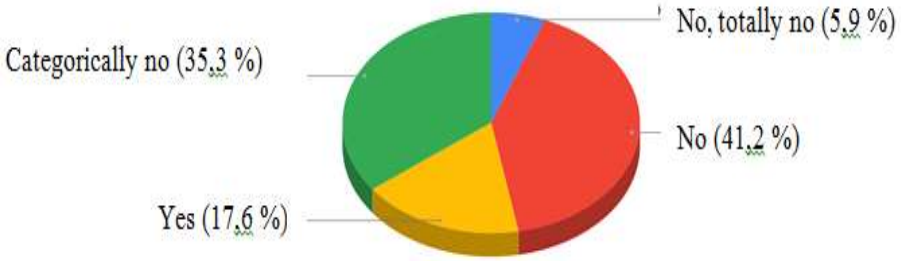


Figure 8. Teachers' answers about the prospects of introducing distance learning.
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)

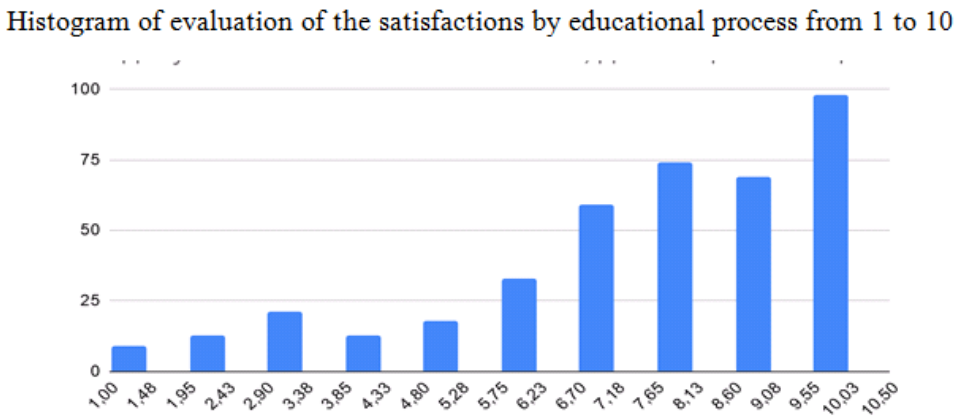
The positive dynamics testifies to the experience gained during the first quarantine and the transition to a remote format, which allowed a more optimistic response to the future prospects of such an organization of the educational process. However, students' answers about the quality of their knowledge, motivation to learn and assessment of their knowledge lead to an analysis of what new challenges teachers will face after leaving

quarantine and after the completion of social distancing. Here are examples of individual surveys on these aspects in the form of table 3.

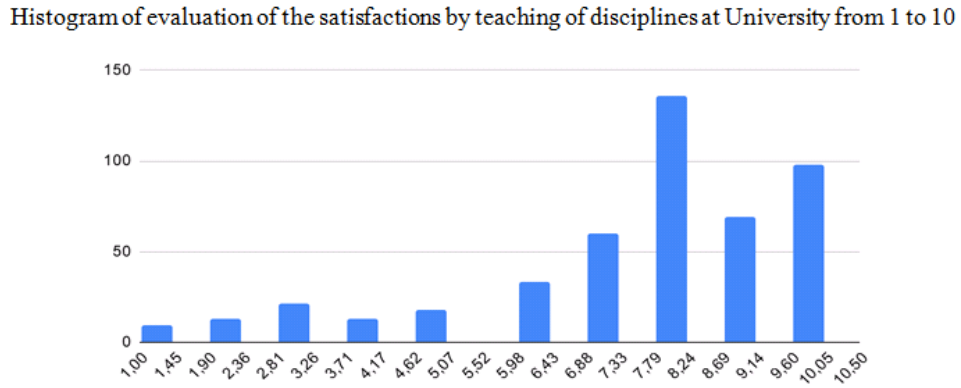
Table 3.
The assessment of the quality of the organization of the distance educational process.

Quality assessments of the organization of the distance educational process	Evaluation of the quality of teaching the discipline	Self-assessment of own work / quality of knowledge acquisition
98 % expressed satisfaction with the quality of education (Histogram 1)	The quality of teaching the discipline from the point of view of most students was sufficient (grades 7.79–8.24) to ensure the proper functioning of the educational process (Histogram 32)	The vast majority of surveyed students rated their work as "good", arguing that the depth of their knowledge became worse through no fault of their own (Histogram 3)

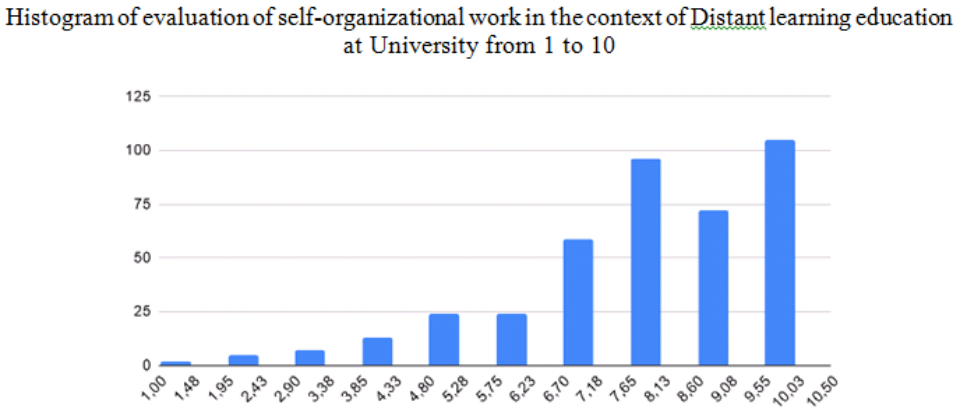
Respondents' answers on the assessment of the quality of the organization of the distance educational process, on the assessment of the quality of teaching the discipline and self-assessment of their own work.



Histogram 1.



Histogram 2.



Histogram 3.
Results are created on the basis of Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

3. Arguments and Discussions

Currently, the scientific and pedagogical staff, administration and management of universities have managed to reflect on their own experience in implementing distance learning and organizing the effective functioning of the educational institution, to observe and compare their own pedagogical ideas and practices. There were a number of investigations dedicated to student’s reactions on way of learning during COVID-19 pandemic (Wargadinata, Maimunah, Dewi, 2020); some aspects of challenges were presented in R. Simamora investigation (2020) etc. During the period of social distancing from the beginning of the pandemic in 2019, training seminars were developed, conducted by institutions, organizations and colleagues at the national and international levels. Online and blended learning have already acquired a completely new perception and understanding (Noorashid, Le Ha, & Alas, 2020). There were recommendation on developed by United Nations Development Programme (UNDP).

A survey conducted by the National Agency for Quality Assurance in Education showed that 86% of Ukrainian teachers did not have significant experience in online education before COVID-19; 80 % of Ukrainian teachers considered themselves ready to study online; 70 % of students were generally satisfied with the quality of online education in universities, although they experienced some difficulties and problems (Stukalo & Simakhova, 2020). In contrast, N. Melnyk and the team of co-researchers showed that many teachers of the humanities experienced psychological discomfort and methodological difficulties in implementing the educational process online (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). Among the recommendations for the introduction of distance learning were: organization of training courses on online teaching methods for teachers; organization of in-depth training courses for online teaching methods for teachers of non-pedagogical specialties (including training in interactive methods of online teaching, formation of an individual learning trajectory, development of multidis

ciplinary online courses); ensuring constant monitoring by the university management of the satisfaction of students and teachers of online learning in order to accumulate statistics in the dynamics, etc. (Stukalo & Simakhova, 2020).

Among the recommendations in overcoming barriers were making changes to the schedule and specifics of the teacher's work; adjustment of individual plans of teachers in the conditions of quarantine; constant replenishment of information materials of the MOODLE distance learning system; activation of educational, cognitive and self-educational activities of students with the help of educational web resources; constant monitoring of the advantages and disadvantages of distance learning in higher education (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). According to research by Western scholars (Rapanta, Botturi, Goodyear, et al., 2020), a significant challenge for Western university teachers has been the lack of pedagogical knowledge required for online learning (Angeli and Valanides 2005; Kali, Goodyear and Markauskaite 2011; Ching, Hsu and Baldwin 2018). Such knowledge includes the technical and administrative aspects of online teaching (for example, the use of platforms and tools and the organization of work processes, respectively). More importantly, it includes the pedagogical foundations and knowledge of the principles necessary for the formation and development of distance learning skills (Rapanta, Botturi, Goodyear, et al., 2020).

According to the already mentioned study by O. Kovtun, N. Melnyk, S. Hryniuk and I. Rohalska-Yablonska, the university is a complex system that includes many actors and functions important for the stability and development of universities, and the situation of force majeure has changed significantly. All processes in higher education. Since the proclamation of the pandemic, most universities in the world have literally had to urgently reconsider their methods of management and organization. Many experts believe that changes related to the pandemic can completely transform the field of higher education, and as a result, require great attention and response (Kovtun, Melnyk, Grynyuk, & Rohalska-Yablonska, 2020).

The main areas of impact of the pandemic:

Research. The research area was least affected during the pandemic compared to other areas of university activity. Many researchers noted that they had more time to search and read scientific literature, work on their articles, and research in general than before the pandemic. In addition, the degree of interaction between researchers around the world remains unchanged, and some scientists note an increase in scientific collaboration on the Internet.

Planning. Due to the fact that there are currently no accurate forecasts for the development of COVID-19 and its impact on the economy, it is extremely difficult for universities to build long-term strategy and planning, but universities in many countries are prepared for a scenario with partial or full online education. It should be noted that many other university processes have been suspended or also switched to an online format, which creates additional risks for universities.

Campus economics. One of the most difficult tasks for universities is to predict the losses associated with the closure of campuses. For many universities, the campus is not just a learning environment that stimulates the formation of a student community. The closure of the town has a very negative effect on university budgets. In addition, the closure of the campus could also lead to possible staff changes, staff reductions and higher unemployment in the region.

Personnel policy. A survey of university leaders shows that working with teachers is one of the main tasks of universities. Qualitative transition to the online format in many cases involves the availability of refresher courses, individual work with teachers (teachers), processing the content of the course, etc., which also requires additional resources. Moreover, due to financial constraints, universities are reviewing their recruitment policies and continuing contacts with faculty, both internally and externally.

Ensuring equal opportunities. The pandemic itself can significantly widen the gap between different populations due to inequalities in social protection, health care and financial savings. Inequality in higher education can be caused by unequal access of students to distance learning in different countries and even within one country (United Nations Development Program, 2020). Despite the awareness of the seriousness of the problem, the range of forms of support available to students from socially vulnerable groups was not very wide.

Health and safety. Under normal campus conditions, security is an important part of university administration. Since most universities conduct online classes during a pandemic, the following tasks come to the fore in terms of security:

- Support for local communities. One of the responses to the challenges of the pandemic has been volunteering at universities that support older people who find it most difficult to adapt to self-isolation, provide local community information on how to protect themselves from the coronavirus, help health facilities, etc.
- Support for students and teachers. During the social distance, it is important to receive feedback from students and university staff. Universities understand that self-isolation can be very stressful for students from disadvantaged backgrounds. A global survey of university leaders shows that supporting students and staff in such cases is the highest priority among short-term goals (Jump, 2020);
- Monitoring. Universities monitor the health of students and staff and use advanced data analysis tools to assess individual translations of university work online.

Monitoring the quality of education. One of the biggest concerns of universities during a pandemic is the decline in the quality of higher education. Due to the uneven readiness of staff and departments for online mode, lack of technical equipment and other difficulties, many students gain a completely different educational experience in the Internet environment, and it is important for universities to identify weaknesses and

develop the right monitoring methods in new conditions. In this context, national and professional centers offer different solutions to help universities.

4. Conclusions

Conducted surveys, questionnaires and analysis of the results of the obtained data make it possible to identify certain psychological and methodological and other aspects that will challenge the scientific and pedagogical staff of higher education institutions of Ukraine during the quarantine period, which are divided into two subgroups: challenges to scientific and pedagogical staff of higher education institutions, the nature of which is the peculiarities of the professional activities of teachers and challenges to the scientific and pedagogical staff of institutions of higher education, the nature of which are the features of the educational activities of students.

The first group of calls includes:

1. Motivation of professional activity (according to the research and answers of respondents presented in diagrams 1–2, figures 1–8, tables 1–3 and histories 1–3, during quarantine some teachers, especially at the beginning, showed lower activity in distance learning courses ; did not always have time to respond systematically to requests from students and administration, as time was spent on the mastery and implementation of ICT in the practice of their professional activities, etc.; a certain percentage of teachers was limited to placing teaching materials on distance learning platforms, others used messaging networks, which qualitatively worsened the desire to communicate, as it took a lot of time to correspond with students and instruct them on the tasks, a certain percentage of teachers did not get along at all);
2. Organizational and methodological unit, which will provide a reorientation of the organization of professional activities from remote to offline format (switching to a new time frame – time management (working from home, the teacher did not have to spend time on the road), another type of preparation for couples, adjustment of work to new conditions (classroom) of ICT support, as not in all domestic institutions of higher education 100 % technical support, working “from home” the teacher without unnecessary obstacles could present a presentation, educational material on the topic, etc.);
3. Psychological aspects of returning to work offline (during the period of social distancing communicative aspects of communication have changed – the teacher did not work “for the audience”, switching to a new mode of work will directly or indirectly affect the emotional state of teachers, provoking emotional stress, etc.).

The second group of calls will be characterized by similar components:

1. Motivation of students (according to the surveys of students presented in the article, their motivation for cognitive activity also decreased, which is explained not only by the stresses caused by forced social distancing, forced mastery of distance learning platforms, multi-vector instruction and speed of change, but also that “staying at home”

students had more time to prepare, and therefore it was possible to "postpone their studies" (according to an oral interview of students of Ukrainian higher education institutions); distance learning platforms (especially those that were not uploaded to the distance platform), teachers had to spend on mastering certain distance learning platforms – registration on platforms, development of electronic resources, etc. All this allowed students to perceive the first lockdown as a vacation. worth podk to realize that this is not an absolute majority;

2. Organization of the learning regime, another challenge that will need to be overcome by scientific and pedagogical staff after quarantine (we connect this challenge with the fact that teachers will not only come up with new forms of high motivation of students to cognitive activity, but also give clear instruction on deadlines, preparation for pairs and advice on the best ways to master the material, etc.);
3. Provision of ICT audiences with means. Note that returning to the audience of students who have already gained experience in online learning and experienced the benefits of ICT in the educational process will require teachers to widely use presentations, videos, teaching resources and in the classroom, which is a challenge for research and teaching staff insufficient staffing of these audiences.
4. Students' request for emotional stability and competence of teachers, which will provide scientific and pedagogical staff to demonstrate emotional intelligence in a given environment, which will be expressed in calm, balance, poise, openness to communication and more.

The challenges we have identified do not claim to be exhaustive, as the study is aimed at a general description of the problem and an attempt to identify certain aspects that will determine the professional activity of research and teaching staff after quarantine restrictions and return to the classical form of education in higher education. Further diagnosis of challenges requires a more in-depth analysis of the scientific literature on the problem, the study of approaches to identifying such challenges and the development of a structural scheme that will provide prospects for further research in this area.

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