May, 2023

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The Erasmus+K2 project DEFEP
Distance Education for Future:
best EU practices in response to the requests of modern higher education seekers and labor market

REPORT

on the results of sociological survey of stakeholders' requests for distance education (students, academic s and teaching staff, HEI management, employers)

Ukraine

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Characteristics of the Study

The study was conducted within the framework of the European Union's international technical assistance Erasmus+ KA2 **DEFEP** "Distance Education for Future: Best EU Practices in Response to the Requests of Modern Higher Education Seekers and Labor Market".

The purpose of the study is to describe the priorities, needs and requests of stakeholders of distance education as a potentially separate form of education.

Research method: formalized online survey.

The general population of the study included students, research and teaching staff, managers and affiliated employers of six higher education institutions:

– Kyiv National Economic University named after Vadym Hetman (KNEU).
– Lviv National Environmental University (LNEU).
– Chernihiv Polytechnic National University (CPNU).
– Uman National University of Horticulture (UNUH).
– V. N. Karazin Kharkiv National University (KNU).
– Petro Mohyla Black Sea National University (PMBSNU).

The dates of the field stage: **May 1–10, 2023.**

Research Sample

Subsample (stakeholder groups)	**Sampling model**	**Sample size (total)**	**Sample size (weighted)**	**Sample accuracy**
Students	Spontaneous, quota (based on the HEI)	4877 resp.	2604 resp.	at a confidence interval **2%** confidence probability is **~97%**
Scientific and and pedagogical staff	Spontaneous, quota (based on the HEI)	1412 resp.	894 resp.	at a confidence interval **3%** confidence probability is **~97%**
Heads of HEIs	Solid	107 resp.	107 resp.	at a confidence interval **2%** confidence probability is **~99%**
Employers	Spontaneous	242 resp.	242 resp.	not subject to assessment

The possible systematic sampling errors:

- The survey was conducted online, so the sample was less likely to include students and academic staff with technical problems accessing the Internet.
- The sample was less likely to include students with little contact with a university.

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● The samples of students and academic staff are not weighted by field of study, so there may be a bias.

Introduction: What is the First Thing that Comes to Mind when You Hear the Phrase “Distance Education”?

The content of all four questionnaires used in the study began with the question indicated in the title, which was used to study the **associations** relevant to different groups of stakeholders in relation to this topic. In this introductory section, we offer a qualitative and quantitative analysis of the perception of the phenomenon of distance education, highlighting the main **semantic nodes** around which this perception is built. We do not plan to compare different groups here; on the contrary, our intermediate task is to identify common structures of perception of distance education for all stakeholders.

Before we begin, we note that (a) synonymous and tautological associations (e.g., “distance” and “training”, etc.) were excluded from the analysis, and (b) the quantitative estimates used in the analysis are conditional and serve only as an organizing tool.

Thus, the most widespread semantic node can be safely called **technological** (about 2.2 thousand mentions). It includes generic names (Internet, laptop, computer, smartphone, screen, monitor, video, camera, technology, etc.) and proper names (Zoom, Google Classroom/Meet, Microsoft Office/Teams, Moodle, etc.), as well as relevant thematic terms: digitalization, (tele)communications, virtuality, online, etc.)

The “second place” in terms of prevalence is collectively occupied by several semantic nodes at once (about 500–1000 mentions in each group):

- **time** node (basically everything related to saving time, being able to "do everything in time", etc.);
- **abstract-spatial** (everything related to being in different places and parts of the country/world, mobility, speed, overcoming distance, travel, movement, etc.);
- **specific-spatial** (related to the house, dwelling, room, etc.);
- **practical** (description in terms of convenience, comfort, accessibility, money saving, etc.);
- **combinational** (the ability to combine studying with work, first of all, but also to combine it with other activities - hobbies, personal life, etc. - or to do other things in parallel).

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Other semantic nodes were less widespread (from 100 to 500 mentions), but are vivid and self-contained enough to describe them:

➢ first, it includes various **educational and procedural** components (presentations, tests, online classes, asynchronous mode, etc.), which are often accompanied by specific criticisms – lack of practice, laboratory work - and emotionally charged associations – nostalgia for classrooms, university;
➢ second – **social and collective** meanings, which in most cases have a negative emotional coloration: lack of "live" communication, meetings, interaction with other people, antisocial lifestyle, etc;
➢ third – **personal and psychological** meanings, which are quite clearly (and, interestingly, almost equally) divided into positive and negative: among the positive ones are independence, self-development, responsibility, peace of mind; among the negative ones – degradation, fatigue, boredom, pain, laziness, lack of motivation, and health problems (strain on eyesight, sedentary lifestyle, etc.);
➢ fourth – the meanings related to the **reasons** for the transition to distance education and the **specific objective situation** – the COVID-19 pandemic and the full-scale military invasion (it is significant that the semantic reference to the coronavirus is one and a half times more common than to the war);
➢ fifth – **abstract situational** meanings: **negative**, i.e., mentioning various problems, difficulties, complexities, needs, increased workload, etc.; and **positive**, i.e., indicating safety, rest, vacations, etc;
➢ sixth – the meanings associated with **progress**: innovation, novelty, modernity, future, prospects, relevance, etc.

Along with various semantic nodes, direct **assessments and epithets** of distance education were regularly included in the associations:

1) **positive evaluative judgments**, such as "good", "cool", "normal", "positive", as well as various positive epithets such as "effective", "rational", "real", etc. There were about 500 such assessments and epithets;

2) **negative evaluations**: "worse", "bad", "low-quality", "ineffective", "low", "insufficient", "impossible", "inferior", etc. Analyzing qualitative data, there were more positive responses than negative ones (about 700), but in terms of the distribution of the audience's attitude to distance education, this indicator is extremely unreliable.

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Here we have tried **to outline a certain range of perceptions of distance education**. We will consider specific valid quantitative assessments of distance education by different groups of stakeholders in the thematic sections.

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Section I. Students' Perceptions of Distance Education

1.1. General information about the sample of students

Sex	Female	Male
	59,5%	40,5%

Year of study	1 (bachelor)	2 (bachelor)	3 (bachelor)	4 (bachelor)	Master's program	PhD-students
	23,3%	26,9%	24,3%	12,7%	11,6%	1,1%

Higher education institution	%
Kyiv National Economic University named after Vadym Hetman (KNEU)	26,6
Lviv National Environmental University (LNEU)	11,6
Chernihiv Polytechnic National University (CPNU)	7,9
Uman National University of Horticulture (UNUH)	11,9
V. N. Karazin Kharkiv National University (KNU)	33,4
Petro Mohyla Black Sea National University (PMBSNU)	8,5

Field of education	%
Natural sciences (including agronomy)	10,9
Technical and mathematical sciences (including computer science, design)	20,8
Social sciences and humanities (including political sciences)	16,2
Economic sciences and management (including marketing and services)	42,9
Medicine	4,8
Law	4,4

Special characteristics	%
Those who combine university studies with a full-time job	38,5
Those who do not have a permanent job, but regularly work part-time	25,8
Those who receive another education at the part-time department in parallel	4,3
Those who are raising a child (children)	2,1
Those who are caring for a close person with special needs	3,2

** respondents could select several options or none at all*

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1.2. Students' opinions on access to distance education

The possibility of introducing distance education is primarily determined by the availability of access to appropriate equipment and technologies for all parties to the educational process. At the time of the study, the **situation with students' access to the Internet is not ideal, but it is not problematic either**:

Table 1.2.1. Access to the Internet (students)

How would you rate the quality of the Internet in the place where you study?	**%**
There is a stationary Internet with relatively high speed (WiFi, cable)	79,5
There is no stationary Internet, but there is stable mobile Internet (3G, 4G)	16,6
There is neither fixed nor stable mobile Internet	3,9
Total	100

About 4 out of 5 students surveyed have access to a stable stationary Internet connection, but it should be noted that **this figure is overstated: since the survey was conducted online**, those students who do not have normal Internet access would be less likely to be included in the sample; therefore, the figure of 80% of students with normal Internet access should be considered **indicative**, but not decisive. There is a certain heterogeneity in access to the Internet among students of different higher education institutions:

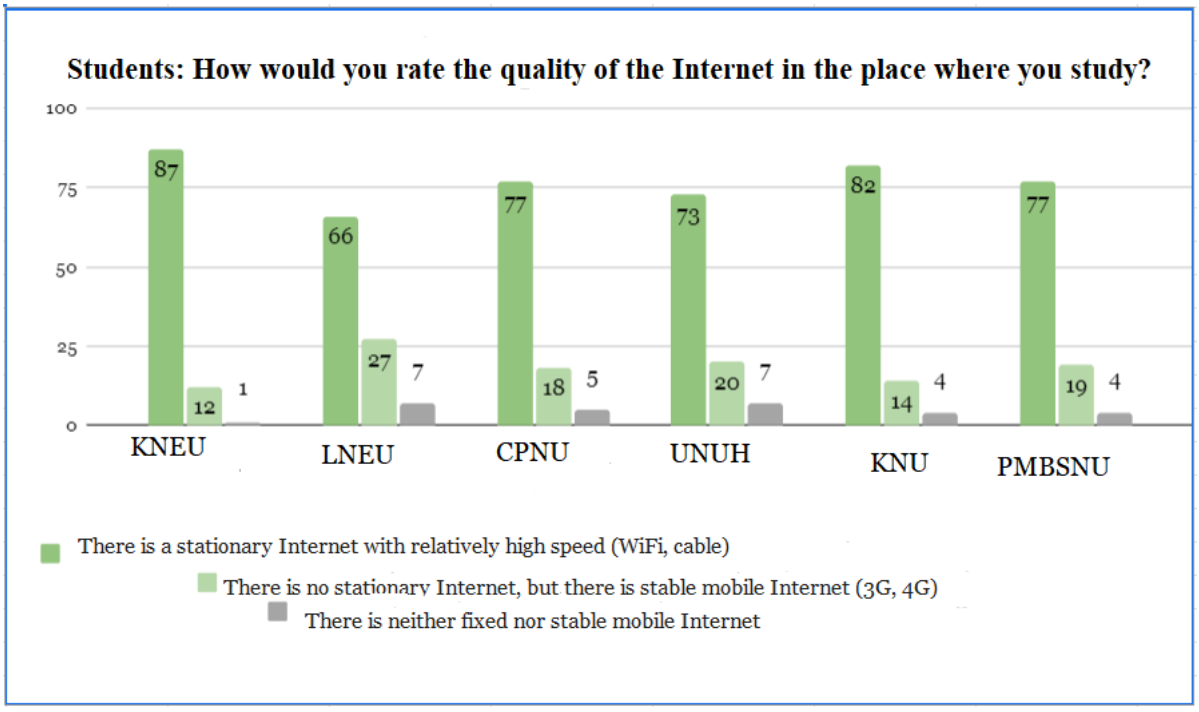

Figure 1A

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The situation with access to technical devices is somewhat better: **almost all students surveyed have smartphones; 8% of students do not have a computer or laptop available on a regular basis.**

Table 1.2.2. Access to devices (students)

What devices do you have available for regular access to online classes?	%
Smartphone	99,3
Laptop / netbook / ultrabook	83,5
Desktop computer	29,7
Tablet	16,2

** respondents could choose several options, so the sum is >100%*

There are no statistically significant differences in access to devices among students of different categories - it is approximately equal for all of them.

Although the vast majority of students have access to a smartphone and a laptop/computer, their habits of using devices to access online classes are extremely mixed: **60% of students use a computer (always or more often), and 40% use a smartphone.**

Table 1.2.3. Devices used to access online classes (students)

What devices do you usually use to access online classes?	%
Almost always a smartphone	21,6
Mostly a smartphone, but sometimes – a computer or tablet	18,1
Mostly – a computer or tablet, but sometimes – a smartphone	23,6
Almost always laptop	36,6
Total	100

Students who combine study and work are 14–19% more likely to join classes using a smartphone than students who do not work at the same time. This is also related to the fact that master's students are 8–12% more likely to use smartphones to connect to online classes than bachelor's students. There is also a certain unexpected pattern between what devices are common for students of different fields of study: the most "computer-intensive" specialties are social sciences and humanities; the most "smartphone-intensive" are natural sciences (see *Figure 1B*).

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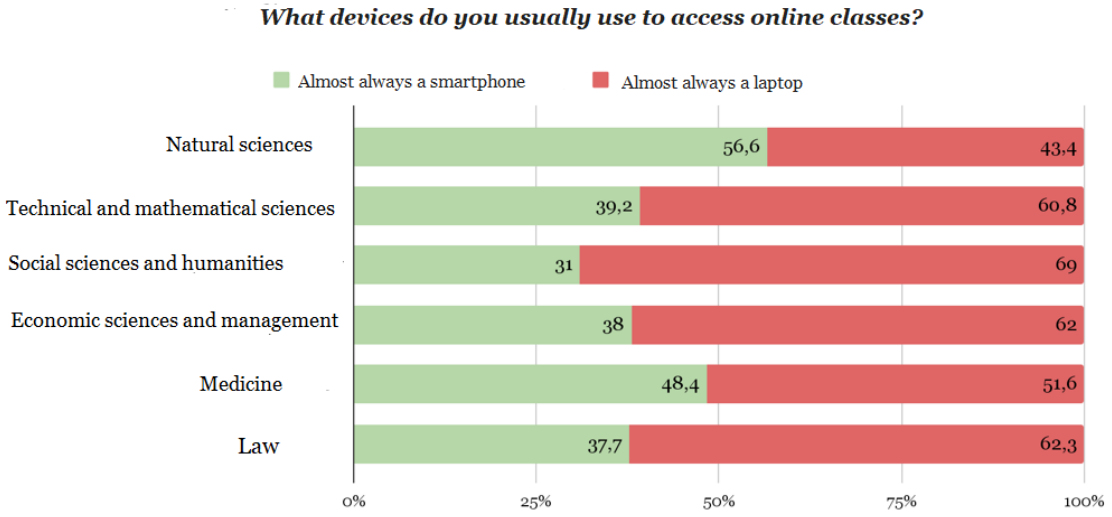

Figure 1B

The statistically significant difference between the devices used by students of different higher education institutions is even more noticeable: at LNEU and UNUH, about 2/3 of the surveyed students always or often use smartphones; in other higher education institutions, the situation is the opposite - most students (55–75%) use laptops and computers more often.

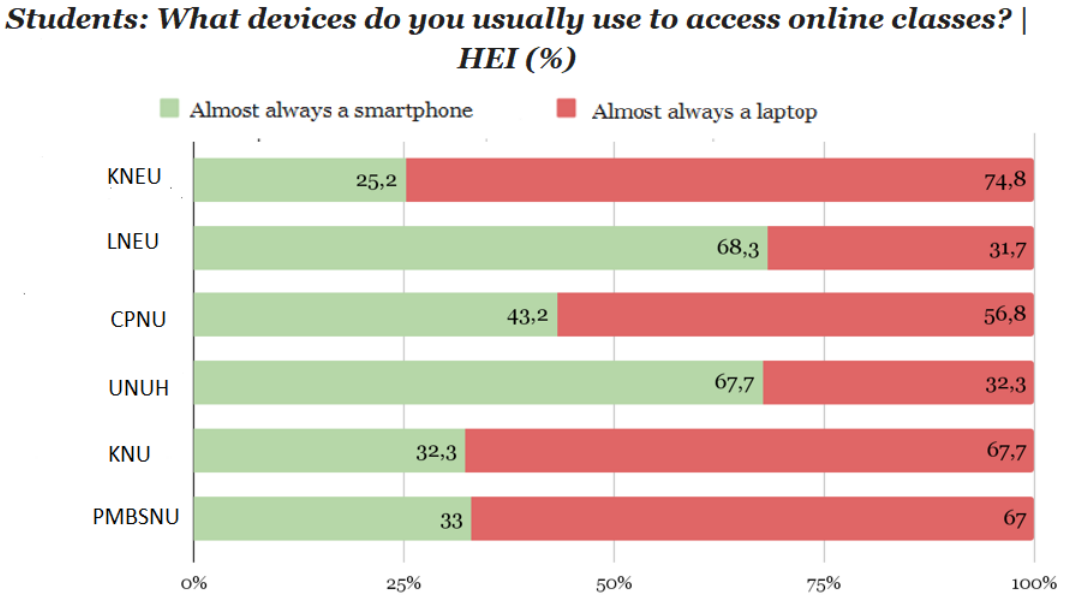

Figure 1C

The format of the class itself **strongly depends** on the **devices** used by students to connect to online classes. One of the main qualitative indicators that characterize online classes is the practice of turning on audio and video: this determines the degree of involvement of online class participants in the learning process, concentration, the possibility of non-verbal contact, etc.

Table 1.2.4. Practice of turning on audio and video in the classroom (students)

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Do you have the ability to turn on audio and video during online classes?	%
I can and do turn on audio/video all the time	29,7
I usually have the opportunity, but do not turn on audio/video	32,3
I don't have this option all the time, but I can turn on audio/video when needed	35
I do not have such an opportunity and will not be able to do so even if requested	3

And despite the fact that almost all students said they have smartphones, and the vast majority also have laptops, not all of them mentioned the ability to turn on sound and cameras – 38% do not currently have this option; in fact, **technically it is possible** (as you know, most modern smartphones and laptops have integrated microphones and webcams), **but there are other limitations**. In order to find out what these limitations are, students were asked a projective question, where each respondent answered not specifically about themselves, but about students in general:

Table 1.2.5. Reasons for not turning on cameras (students)

There are students who usually do not turn on their cameras during online classes. What do you think the reason is?	%
Feel general discomfort in front of the camera	74,7
They do not want to show themselves in the morning	65,4
There are always other people around them	64,1
No webcam / not working	63,9
Due to low internet speed	63,1
They do other things at the same time	45,4
They consider it a violation of private space	25,9
A teacher does not turn on his/her webcam	23,2
Other	<5

** respondents could choose several options, so the sum is >100%*

The main students' reasons for the cameras being turned off were **psychological**: general discomfort in front of the camera, unwillingness to show themselves in the morning, and the fact that there are other people around (65–75%). **Technical reasons** (low internet speed and problems with the camera) were cited by 60–65% of students, but in our interpretation, this is more like a stereotype, as the real situation with access to devices and the internet is much better. The **ideological** refusal to turn on the cameras (i.e., seeing the camera as a violation of private space) was mentioned as a possible reason by about a quarter of the respondents.

Let us emphasize the main patterns that are relevant in this context:

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- for **female students**, general discomfort and unwillingness to "show themselves in the morning" are significantly more important reasons for not turning on cameras than for **male students** (by 10-15%);
- the same psychological reasons – discomfort in front of the camera, unwillingness to "show yourself in the morning," and the presence of people around – are more often mentioned by **junior students** (also by 10-15%).

The specific requirement to turn on the cameras is also extremely ambiguous: **it causes discomfort for half of the students** surveyed, but the majority (67%) of students still comply with the requirement.

Table 1.2.6. Reaction to the requirement to turn on cameras (students)

Which statement is closer to the truth?	%
The requirement to turn on the camera in online classes **makes me uncomfortable, but I turn it on**	29,6
The requirement to turn on the camera in online classes **makes me uncomfortable, so I do NOT turn it on**	21,4
I **normally accept** the requirement **to turn on the camera in online classes and turn it on**	37,6
I **understand the requirement** to turn on the camera in online classes, **but I don't turn it on**	11,4
Total	100

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1.3. Students' assessment of platforms and communications

Other key points in the organization of distance education are the programs and services that are used to implement the learning process. The question of the convenience of **online learning platforms** for students has a fairly clear answer:

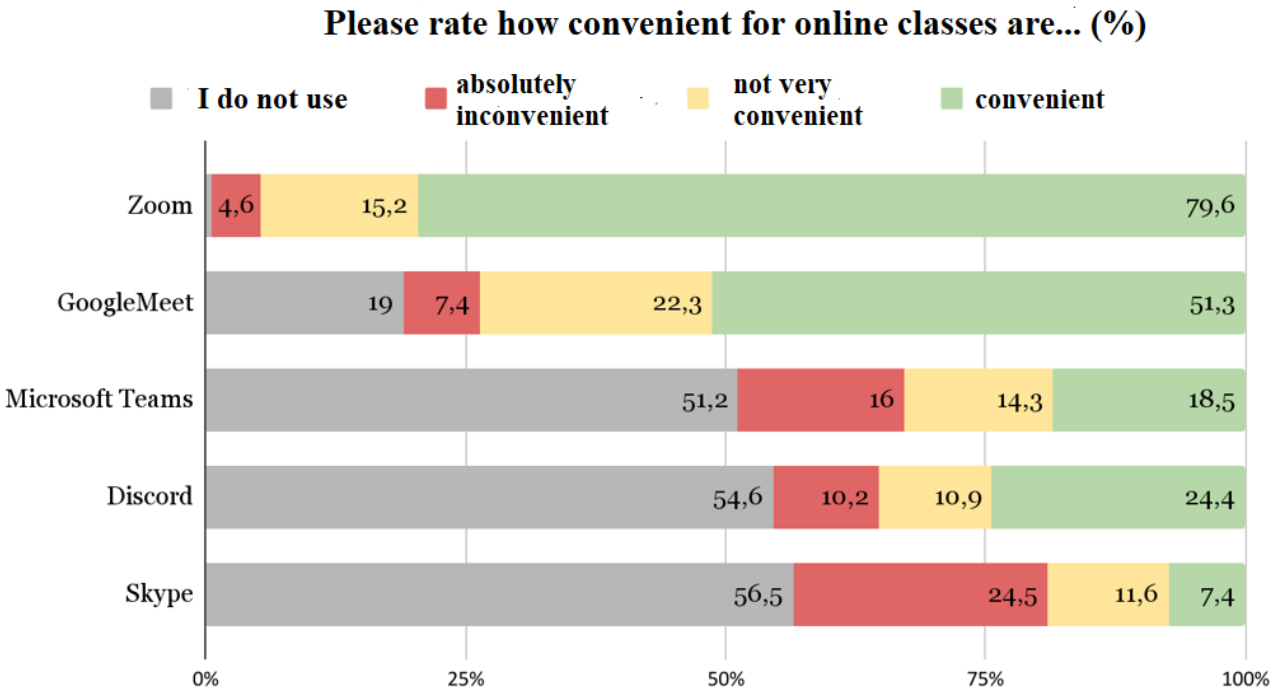

Figure 1D

Zoom is used by almost all respondents, and 80% of them find it convenient. It is noteworthy that this platform is highly appreciated by all categories of students, regardless of the university, field of study, year of study, gender, etc.

Google Meet is used by 80%, but it is convenient enough for only 51%; other platforms are used by less than half of the surveyed students. This platform performs somewhat better at KNEU and VKNU, and worse at CPNU, LNEU and UNUH.

Microsoft Teams is not in demand everywhere, except for CPNU, where this platform is close to the overall leader, Zoom, in terms of ratings and prevalence. This platform is also slightly more popular among students of law, economics, and management.

The situation is similar with the channels for **asynchronous communication and communication outside of classes**: there is a clear leader – **Telegram** – which is convenient for 80% of students of all categories.

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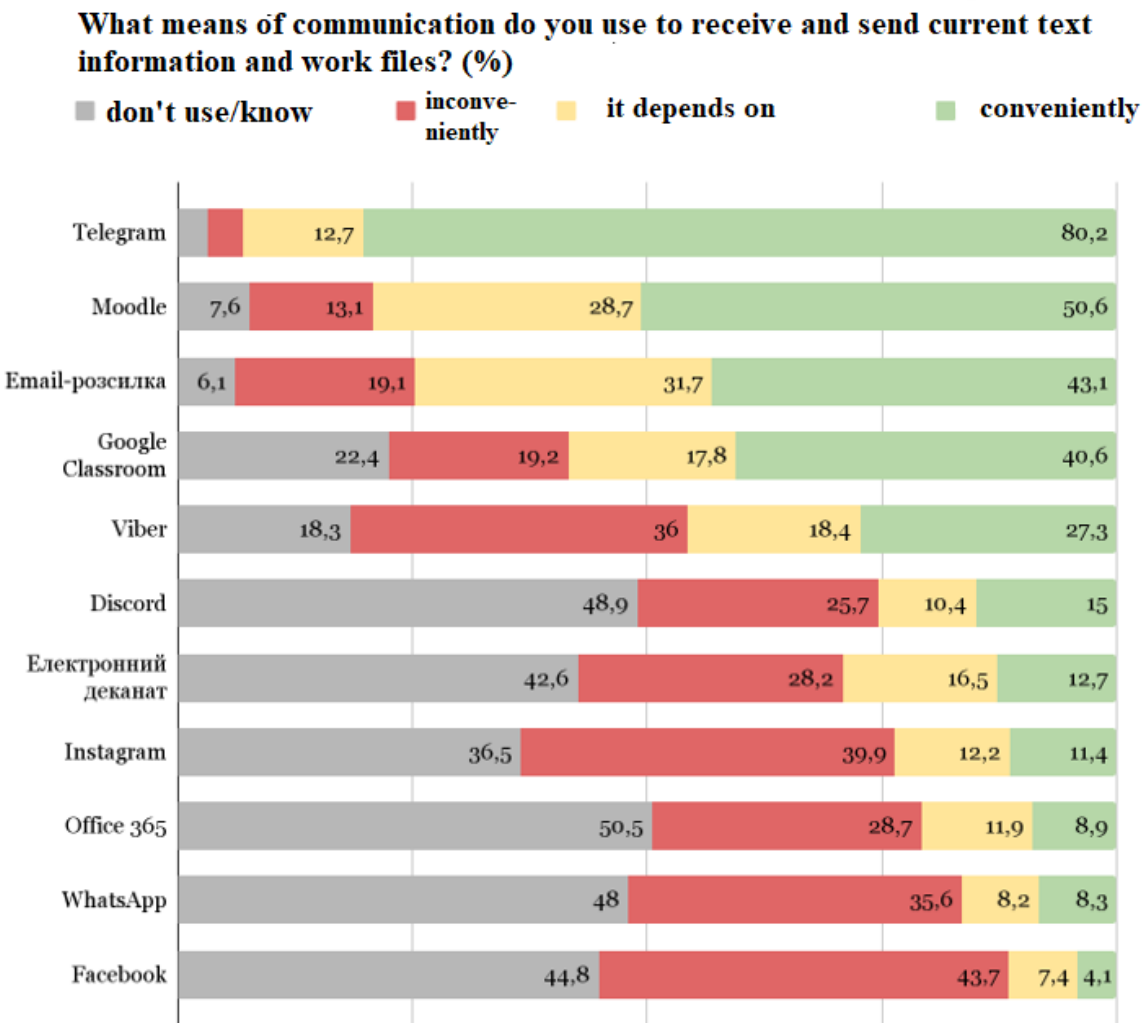

Figure 1E

Since there is a very high degree of variability in the answers to this question, the generalized rating of communication channels should be considered separately for each HEI. For this purpose, we propose an index of acceptability of communication channels, which varies from 1 – completely unacceptable to 10 - maximally acceptable (see Table 1.3.1.).

Table 1.3.1. Channels of communication (students of different HEIs)

&	V. Hetman KNEU	LNEU	CPNU	UNUH	V.N. Karazin KNU	P. Mohyla BSNU
Telegram	9,5	9,1	9,1	7,9	9,4	8,5
Moodle	8,3	6,8	8,4	7,8	6,9	8,9
Email-розсилка	8,3	7,5	6,4	7,3	7,4	5,1
Google Classroom	6,3	5,3	3,6	4,6	8,6	3,7
Viber	5	7,9	5,5	7,8	4,9	4,6

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Discord	3,2	4,9	3,9	4,3	3,5	4
Electronic dean's office	3,5	4,1	3,3	3,9	4,9	2,5
Instagram	3,3	5,6	4,1	4,7	3,7	3,8
Office 365	3,9	4,2	3,9	3,6	2,7	2,6
WhatsApp	2,9	4	3,1	4	3,3	2,9
Facebook	2,7	4,2	3,2	3,9	2,8	3

(index of acceptability of communication channels; min=1, max=10)

- The situation at **V. Hetman KNEU** generally coincides with the average indicators for the array; the only exception is Office 365, which is rated slightly higher than in other HEIs, although it still remains not very popular.
- At **LNEU**, the picture is markedly different from the "average": Telegram remains the sole leader, but Viber and Email take the second or third positions, while Moodle and Google Classroom are rated lower than in other universities.
- The internal rating of communication channels at **CPNU** is in line with the average (except for Google Classroom, which is rated lower than in other HEIs).
- **UNUH** demonstrates a rather unusual situation, as the leaders are three positions at once – Moodle, Telegram, Viber.
- **V.N. Karazin KNU** remains the overall leader (Telegram), but Google Classroom is approaching it, and Email is third; Moodle receives a significantly lower score.
- Students of **P. Mohyla BSNU** rate Moodle the highest, even ahead of Telegram. The rest of the channels have low acceptability scores.

From the **general trends that are characteristic of all HEIs**:

- ➢ breakdown by gender: female students perceive Discord worse (by 21-27%), but better than Email (by 11-14%), Google Classroom (by 12-15%); male students, respectively, – on the contrary;
- ➢ the fact of combining studies with work or the year of study does not affect the assessment of the convenience of communication channels;
- ➢ the field of study does not affect the assessment.

1.4. Students' feedbacks on work formats

The distance learning format requires at least the adaptation of traditional forms of lecture teaching, and in the long run – the development of special forms for distance education. At this stage, students of the universities where the survey was conducted (83% of respondents chose this option) almost unanimously called an online lecture with a presentation the most popular and acceptable option for teaching material. In the second tier, there are brief notes (60%) and video recordings of lectures (55%). The Moodle distance course is considered an effective form by slightly less than half of the surveyed students – 47%; the other forms are valued even lower.

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Table 1.4.1. Effective forms of presenting material in a distance format (students)

What forms of teaching do you consider to be the most effective in distance learning?	**%**
Online lecture with a presentation (PowerPoint, etc.)	83,4
Brief summary/notes of the lecture	60
Video recording of the lecture	54,5
Distance learning course in Moodle	46,9
Electronic interactive materials	37,9
Video instructions and screenshots	36,5
Textbooks and manuals on the topic	33
Articles and monographs on the topic	21,6
Audio recording of the lecture	11,1
Online lecture without presentation	10,2

** respondents could choose several options, so the sum is >100%*

An online lecture with a presentation is considered the most effective form by all categories of students, but the assessment of other forms differs significantly among students of different study areas:

- students of **natural sciences** value video instruction somewhat higher than other students; at the same time they value brief notes and electronic interactive materials lower than other students;
- students of **technical and mathematical** fields consider video recording of lectures and video instructions more effective than other students;
- **social sciences and humanities** students consider Moodle distance learning courses to be less effective, but they rate electronic interactive materials somewhat higher;
- the scores of students of **economics and management** fully correspond to the overall rating;
- **medical** students value textbooks and manuals, as well as monographs and articles, much more than others, while they are more skeptical about Moodle distance courses;
- **law** students have a much worse attitude towards video lectures, video instructions and interactive materials, but a better attitude towards textbooks and manuals.

Також відрізняються **оцінки ефективності форм викладу матеріалів серед студентів різних ЗВО**: **Assessments of the effectiveness of teaching methods** also differ **among students of different universities**:

Table 1.4.2. Effective forms of presenting material in a distance format (students of different HEIs, %)

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	V. Hetman KNEU	LNEU	CPNU	UNUH	V.N. Karazin KNU	P. Mohyla BSNU
Online lecture with a presentation (PowerPoint, etc.)	89,8	76,4	82,3	75,8	85,6	76
Brief summary/notes of the lecture	65,1	48,3	56,4	42,9	66,8	60,5
Video recording of the lecture	65,9	41	48,9	32,6	57,6	61,3
Distance learning course in Moodle	57,7	30,4	57,1	49,9	40,6	46,4
Electronic interactive materials	43,8	22,6	33,2	23,3	45,4	35,7
Video instructions and screenshots	39,4	31,6	41,2	28,7	34,8	47,2
Textbooks and manuals on the topic	34,2	16,9	23,6	20,5	45,2	29,6
Articles and monographs on the topic	19,6	14,8	17,6	14,7	28,6	22,8
Audio recording of the lecture	8,9	14,8	11,6	16,1	9,9	9,9
Online lecture without presentation	6,7	14,6	12,1	15,1	9,3	10,3

Another issue is the adaptation of traditional **forms of knowledge control** to the realities of distance education. Here, too, there is a favorite, although not so clear-cut, – tests that are preferred by 63% of the surveyed students. About half of the students also chose presentations and reports during classes (52%) and homework (50%). Group forms of work (both at home and in class) and oral answers in class were mentioned as preferable by 32-35% (see *Table 1.4.3*).

Table 1.4.3. Preferred forms of work and knowledge control (students)

What forms of assignments do you prefer?	%
Control tasks in a test format	62,9
Presentations and reports during classes	52
Written homework (essays, analytical notes, essays, etc.)	49,7
Oral answers, messages during classes	35,1
Group homework, projects	35
Group assignments in seminars (practical) and laboratory classes	32,2
Other	7,2

** respondents could choose several options, so the sum is >100%*

For students of **different fields** of study, preferences for assignment forms differ, although not radically. We can note a more loyal attitude to group homework among students of social sciences and humanities, as well as economics and management sciences, compared to other fields. Medical students are more satisfied with oral answers than students of other fields. Also

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interesting, though expected, is the pessimism of students of natural and technical and mathematical sciences towards presentations and reports during classes.

Table 1.4.4. Preferred forms of work and knowledge control (students of different directions, %)

&	Natural sciences	Technical and mathematical sciences	Social sciences and humanities	Economics and management	Medicine	Law
Tests	61,2	66,6	56,3	62,4	65	74,6
Presentations and reports during classes	38,4	33,7	57,6	63,6	45,7	49,5
Written homework (essays, analytical notes, essays, etc.)	45,9	48,5	55	48,6	46,3	58,5
Oral answers, messages during classes	36,3	32,8	40,4	32	48,3	40,2
Group homework, projects	26,2	27,4	40,7	40,6	28,4	26,4
Group assignments in seminars (practical) and laboratory classes	32,4	26,7	32	35,1	34,6	31,1

Another issue is the perception of **asynchronous interaction**.

Table 1.4.5 shows that the asynchronous mode of educational interaction has its advantages, such as time saving, convenience, and reduced fatigue during learning.

However, asynchronous learning also causes certain problems associated with decreased motivation, difficulties in learning the material, and limited communication. To ensure a high-quality learning process in asynchronous mode, it is important to find a balance between independence and support, as well as to develop effective methods of interaction and motivation of students.

Table 1.4.5. Characteristics of the asynchronous learning (students)

How can we describe the asynchronous form of educational interaction?	**%**
positive characteristics	
Allows to save **a lot of time** for other things	60,4
This form is more **convenient** than the others **because there is no schedule**	56,3
Asynchronous form **reduces fatigue from working with computers and gadgets**	43,7
This form allows you to **maintain psychological comfort**	42,2
This form ontributes to **more meaningful consultations with teachers**	14,6
negative characteristics	
This form **does not provide a sense of real learning**	31,2

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In this form, **knowledge is absorbed worse**	31,1
It's harder for **me to force myself to study** under this form of learning	26,9
In such a form of education, I **lack communication**	25,3

** respondents could choose several options, so the sum is >100%*

The study does not include a special question about its unambiguous assessment, but indirect indicators show that students tend to evaluate it positively: the highest rating is given to the fact that this form saves a lot of time (60% of students chose this option) and is convenient because of the lack of a schedule (56%). At the same time, about one-third of students agree that asynchronous form does not provide a sense of real learning and that knowledge is less well absorbed in this form.

1.5. Students' perceptions of workload during distance education

Traditionally, one of the main indicators of the intensity of educational practices is the time spent on them. The students were asked to answer the question of **how much time they spend on average on distance learning**, and the following results were obtained:

Таблиця 1.5.1. Кількість часу, що витрачається на навчання (студенти)

On average, how much time do you spend on distance learning (including participation in classes, preparation, completion of assignments, etc.)?	%
up to 5 hours per week	7,8
5 to 10 hours per week	18,5
10 to 20 hours per week	25,9
20 to 30 hours per week	24,5
30 to 40 hours per week	14,9
40 and more hours per week	8,4
Total	100

About half of the students spend 10–30 per hours a week; less than 10 hours – 26%, more than 30 hours – 15%. From general patterns:

- for obvious reasons, junior students spend somewhat more time studying than senior students;
- also, for obvious reasons, students who combine study and work spend significantly less time studying than those who do not work in parallel;
- for reasons that are not obvious, female students spend a little more time than male students;

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- on average, students of medical specialties and law spend the most time studying; students of natural sciences, economics and management spend the least time studying;
- there is also a significant difference in the distribution of time spent on distance learning among students of different HEIs: this indicator is the highest among students of V.N. Karazin KNU and Petro Mohyla BSNU; the lowest – among students of LNEU and UNUH (see *Figure 1F*).

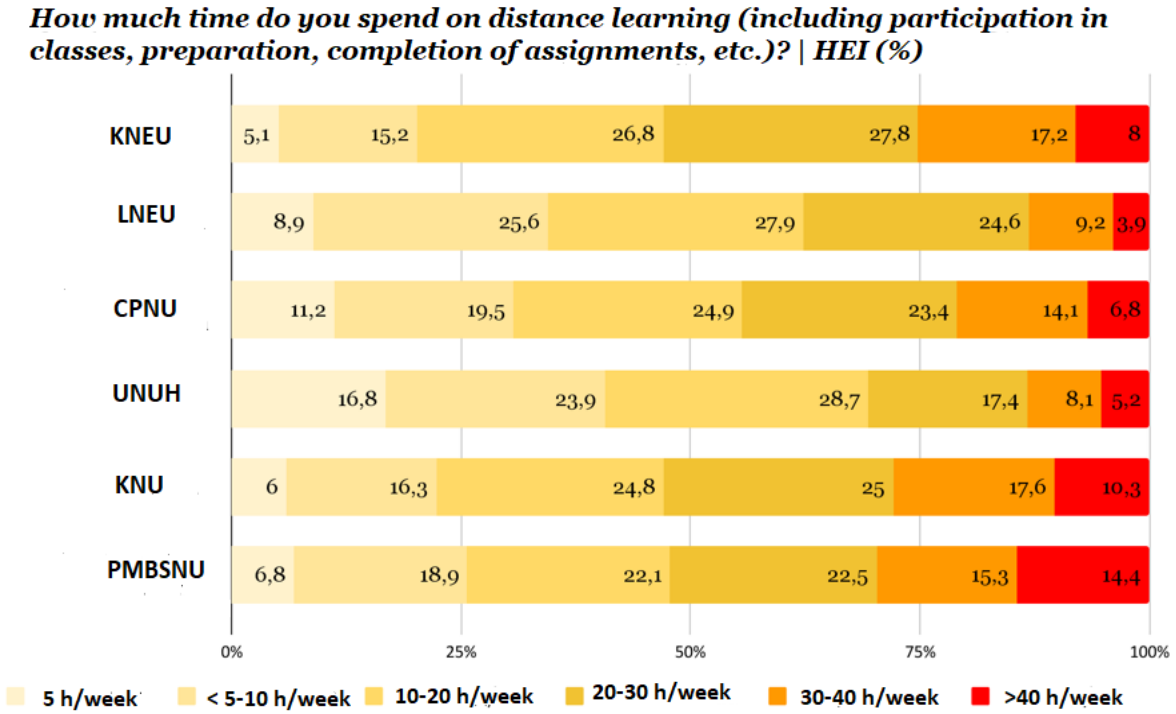

Figure 1F

In addition to the time spent, to assess the workload of students in the distance format, a separate **comparison** was made with the workload situation **during the full-time format**:

Table 1.5.2. Comparison of forms of education in terms of workload (students, %)

Which learning format is better suited to this statement?	**in a full-time format**	*roughly the same*	**in a remote format**	**Total**
Less independent work, less homework…	25,1	61,3	13,6	100

In terms of the amount of **independent work** and homework, **the vast majority of students do not notice any difference between the full-time and distance learning formats**; most of those who notice see a higher workload of independent work in the full-time format that is rather contrary to stereotypes.

Table 1.5.3. Assessment of changes in workload in different forms of education (students, %)

In your opinion, has the workload changed in distance	**Students about**	**Students about**

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learning compared to full-time education?	students	teachers
Yes, it has increased significantly	15,3	16,5
Yes, it has increased slightly	27,7	**35,2**
No, it hasn't changed	30,8	28,8
Yes, it has slightly decreased	20,6	15,2
Yes, it has significantly decreased	5,6	4,3
Total	100	100

Overall student assessments of how the transition to distance learning has **affected the workload of students and teachers** are not very informative: about a third of students say their workload has not changed much; 44% say their workload has increased somewhat or greatly; and 26% say it has decreased.

The situation is more unambiguous with the students' assessment of the workload of teachers: a little more than half of the respondents chose the options "somewhat increased" and "significantly increased."

1.6. Socio-psychological and motivational components of distance education

The forced transition to a distance learning format is associated with extremely negative events – first the COVID-19 pandemic and then a full-scale military engagement; however, we can say that during the functioning of this learning format, its perception has been sufficiently separated from the negative background to be considered ad hoc. The answers to the questions about the **emotions** that the transition to the distance learning format caused in students are indicative:

Table 1.6.1. Reaction to the transition to the distance learning format (students)

What emotions did the transition to the distance learning format cause you?	%
I was **saddened and disappointed** by this transition	22,5
It caused almost **no emotions**	40,8
Feeling **of satisfaction and joy**	36,7
Total	100

Less than a quarter of respondents (23%) felt negative emotions, while 37% felt positive; another 41% said that this transition caused them almost no emotions.

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Students of **KNEU named after Vadym Hetman** (12-20% more often) and LNEU (8-13% more often) were most likely to feel **happy about this transition**; students of **V.N. Karazin KNU** were the **most upset** (negative emotions were noted 8-14% more often than among students of other HEIs). Also, **junior students** were somewhat more upset by this transition; not even all students, but **female students**, as women and girls were more likely to express negative emotions about the transition to the distance format. **The least negative emotions were expressed by students of technical and mathematical specialties**, and the most - by **medical, natural, social** and **humanitarian specialties**. And it is expected that **students who combine study and work** are much **more positive** about this transition.

The explanation for such rather positive emotions from the transition may lie in the comparative assessment of full-time (on-campus) and distance learning formats according to some socio-psychological criteria: the **majority of students (60%)** clearly indicate that it is **more psychologically comfortable to study in a distance learning format**; on the other hand, the same **60% note that full-time education causes more fatigue**. This is complemented by the fact that for 80% of students distance education makes it easier to combine study and work. On the other hand, the **majority of students (58%) say that it is easier to establish friendships and work relationships** in the full-time/online format.

Table 1.6.2. Social and psychological comparison of learning formats (students, %)

Which learning format is better suited to this statement?	**in a full-time format**	*roughly the same*	**in a remote format**	**Total**
Psychologically more comfortable...	17,3	22,2	**60,5**	100
Causes more fatigue...	**59,4**	26,8	13,7	100
It is more convenient to combine study and work...	4,5	12,8	**82,7**	100
It's easier to establish friendships and work relationships...	**57,7**	30,5	11,8	100

Speaking specifically about the issues of student **self-organization** and motivation to study, the respondents say the situation is contradictory. There is no systemic shift in the difficulty of organizing a working environment for students: they find it about equally difficult/easy to do so in both formats. But in the issue of motivation, the self-evident hypothesis is partially confirmed: for a significant number of students (40%), it is more difficult to **motivate** themselves to study in the distance format; in the full-time format – 17%; approximately the same problems with motivation to study in different formats are reported by 42%.

Table 1.6.3. Social and psychological comparison of learning formats (students, %)

Which learning format is better suited to this statement?	**in a full-time**	*roughly the same*	**in a remote format**	**Total**

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	format			
It is more difficult to organize the work environment…	29,4	40	30,6	100
It's harder to motivate yourself to study…	17,2	42,4	**40,4**	100
It is more pleasant to study…	30,6	28	**41,4**	100

In answering a kind of summarizing question – which form of education is more pleasant – students' opinions are fundamentally different: about 40% choose distance learning, 30% choose full-time, and 30% say it is about the same. There are several important patterns in this ambiguous assessment:

1) there is an opposite trend: **master's students are less satisfied with distance learning** (by 5-8%): obviously, it is explained by their experience in full-time / face-to-face study format. On the other hand, **students who combine study and work are more satisfied with distance learning** (by 6-8%); and there are significantly more of them among master's students than among bachelor's students. Therefore, these two opposite trends overlap, which in total gives a certain average estimate;
2) **students of natural sciences** (by 7-11%) and **medical students** (by 30-35%) are also **less comfortable with the distance learning** format;
3) there is a significant difference in the answers to this question among students of different HEIs: students of V. N. Karazin KNU and UNUH tend to prefer full-time / face-to-face form, and students of V. Hetman KNEU are the most distance-oriented.

Table 1.6.3. In which format is it more pleasant to study (students of HEIs, %)

It is more pleasant to study…	**in a full-time format**	*roughly the same*	**in a remote format**	**Total**
V. Hetman KNEU	19,8	25,5	**54,7**	100
LNEU	28,1	30,4	**41,6**	100
CPNU	29,5	28,5	**42**	100
UNUH	**35**	33,8	31,2	100
V.N. Karazin KNU	**38,2**	27,7	34,1	100
PMBSNU	32	25,7	**42,3**	100

Attitudes and perceptions of distance education are also embodied in students' awareness of certain shortcomings. Summarizing and analyzing students' responses to the **open question** about **what they lack in distance education** that the university could help them with, we can identify some common trends and featu

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- students noted the lack of communication and the lack of opportunities for "live" communication with fellow students and teachers; this drawback was most often mentioned by students of KNEU, KNU, and CPNU;
- a significant number of students from KNEU and KNU also noted the desire to have more time to complete assignments;
- students from LNEU and UNUH pointed to technical needs: most often they mentioned the need to purchase a laptop or tablet; in some cases, students mentioned the lack of licensed software;
- stable Internet connection was also mentioned by students as an important element of distance education;
- the importance of increasing the practical and interactive component of distance education was emphasized by students of all universities, which actualizes the need to introduce interactive tools and virtual practical classes;
- students of all universities noted significant problems with motivation caused by the distance learning format; it is possible to formulate a generalized need to create certain motivational programs and resources that will help support students in the distance learning process;
- the desire to reduce the workload of students was expressed by representatives of KNU and PMBSNU that indicates the need to adapt programs and curricula to the peculiarities of distance learning;
- the need for more consultations from teachers was formulated by students from all universities; in addition, the issue of interaction with teachers was considered from the other side - students from all universities noted the need for greater understanding and loyalty from teachers, which emphasizes the importance of support and cooperation between students and teachers in distance learning;
- students from all universities noted that it is desirable to have lecture recordings and the ability to receive information asynchronously.

Overall, the analysis of the data suggests that the successful implementation of distance education requires the development of effective communication tools, optimization of the learning load, creation of practical components, motivational support, access to the necessary technologies, and sufficient support and advice from teachers.

1.7. Students' opinions about the quality, cost and choice of distance education

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While the social and psychological aspect of the comparison of the full-time and distance learning formats was still in favor of the latter, the **trend reverses** when considering the quality of the educational process.

Table 1.7.1. Comparison of the quality of education in different learning formats (students, %)

Which learning format is better suited to this statement?	**in a full-time format**	*roughly the same*	**in a remote format**	**Total**
Students are more likely to miss classes…	**43**	36,2	20,9	100
Students are more actively participating in classes…	**42,6**	39,4	17,9	100
Teachers are better at lecturing…	32,8	**44,1**	23,1	100
Teachers are better at conducting seminars (practical) and laboratory classes…	**39,9**	**42**	18,2	100
It is possible to get a better education…	**49,9**	40,4	9,6	100

Although students say that they are more likely to miss classes in the full-time format, the rest of the indicators point to the **advantage of the full-time form in terms of the quality of the educational process** in the perception of students: This applies to student activity in the classroom (25% higher in full-time than in distance education), the quality of lectures/seminars/laboratory classes (10-22% higher), and especially the generalized assessment – 50% of the surveyed students consider education in full-time / face-to-face format to be of higher quality; 10% – in distance format; another 40% assess the quality approximately equally.

Trends in assessing the quality of education depending on the format are very similar to those described in the previous section:

1) students of V.N. Karazin KNU and UNUH prefer the full-time format even more than students of other institutions;

2) students of medical and natural sciences specialties are also even more likely to evaluate the full-time form as the one that provides a higher quality education;

3) the situation is somewhat different with the year of study: junior students are more likely to give a definite assessment (either in favor of full-time or distance learning), while senior and master's students are more likely to choose the middle option – “about the same”.

An indirect indicator of the quality of distance learning can be the answer to the question of **how much education in this form should cost** (compared to other forms):

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Table 1.7.2. Relative cost of distance education (students)

Do you think the cost of distance education should be...	%
the same as full-time education	18
lower than for full-time education, but higher than for part-time education	60,5
the same as in the part-time program	21,5
Total	100

There is a significant difference in the assessment of the cost of distance learning among different categories of students. First, there is a different assessment by students of **different HEIs**:

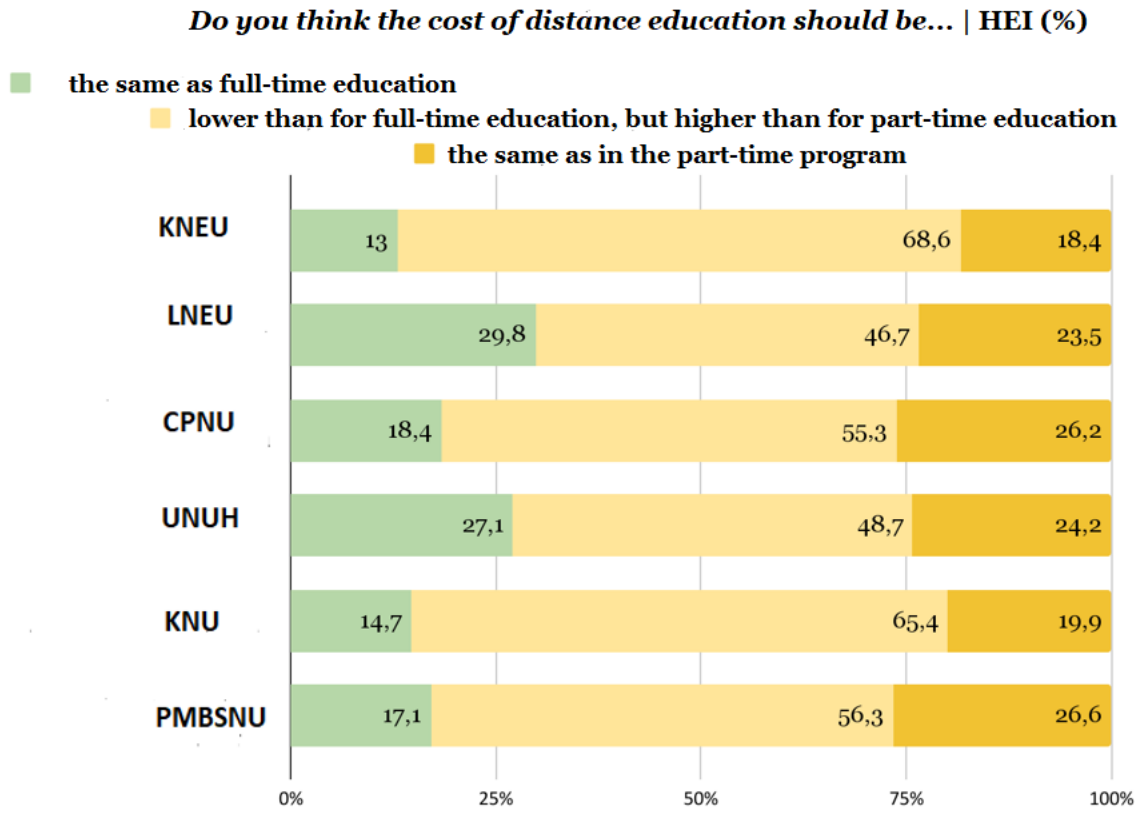

Figure 1G

Second, it is a different assessment among **students of different years of study**:

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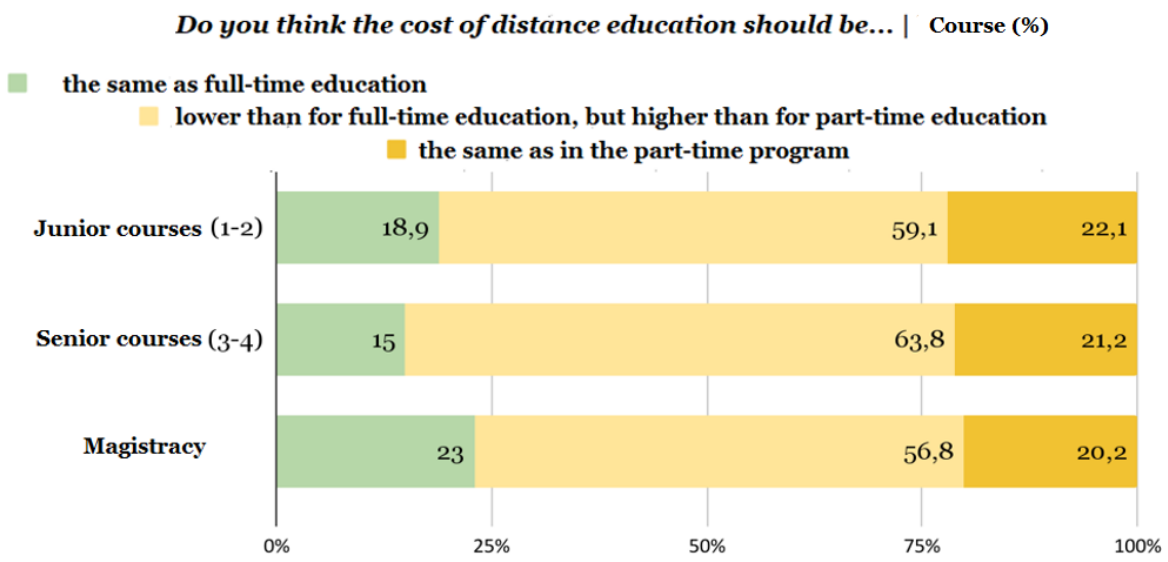

Figure 1H

Third, it is a different assessment by **students of different areas**:

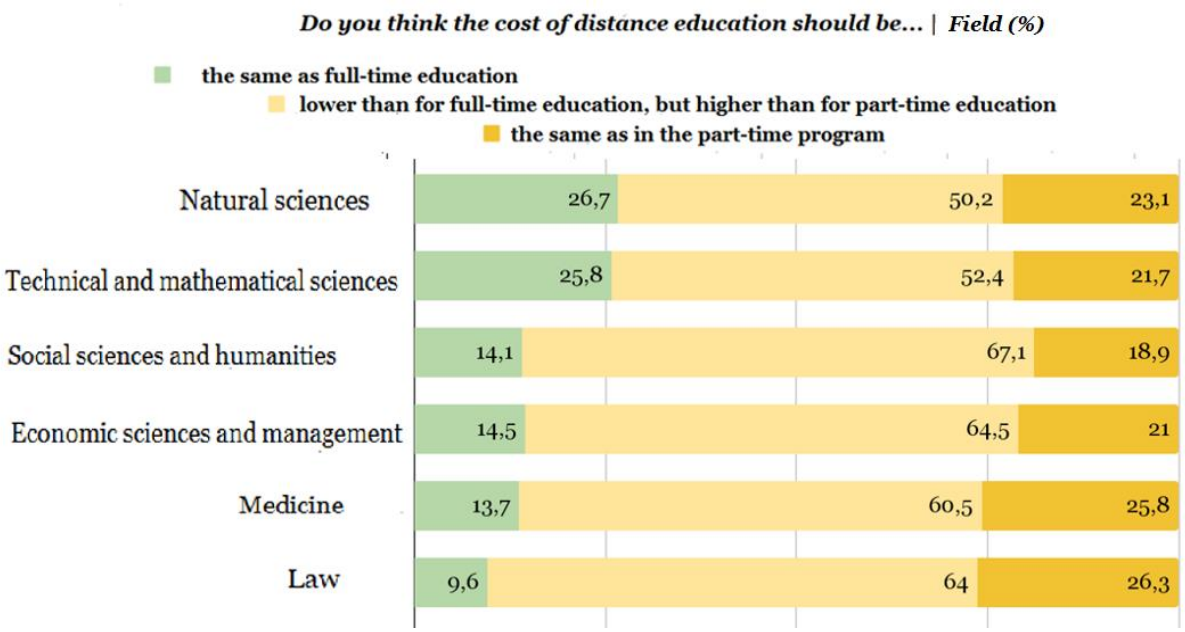

Figure 1I

The following is a **generalized question** about students' assessment of distance education:

Table 1.7.3. Readiness to enroll in a master's program in distance learning (students)

If your university offered distance learning as a separate form of master's program, would you choose it?	%
Definitely yes	30,2
More likely, yes	41,6

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Rather, no	19,9
Definitely not	8,3
Total	100

Among the answer options, the medium/undecided option was deliberately not offered in order to capture the main intention in the general perception of the initiative to open distance education. In general, **almost three quarters of students (72%) tend to choose the distance learning format for master's programs**. This figure can be considered overestimated, but the main trend is unambiguous - modern students of the universities where the study was conducted are rather ready to implement distance education as a separate form. It is worth emphasizing the main trends here:

- senior students are more optimistic about this initiative than junior students (by 4-7%);
- this initiative is best perceived by students majoring in law, economics and management; the worst - by medical students;
- working students are 20% more likely to support this idea than students who do not work;
- for all HEIs the situation with the assessment of this initiative is approximately the same, except for V.N. Karazin KNU: students of Karazin University are 7-12% less interested in the distance format of the master's program;
- the main reason for choosing a distance format in a master's program was, as expected, that students work or plan to work (86%); another 22% noted this option because they are abroad, and 13% because they are studying at another educational program in parallel; the rest of the reasons received <5% of responses.

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Section II. Academic Staff's Perception of Distance Education

2.1. General information about the sample of academic staff

Sex	Female	Male
	67,6%	32,4%

Position	Assistant / lecturer	Senior lecturer	Associate Professor	Professor
	9,1%	15,1%	58,8%	17%

Share of the official salary	0,5 of the official salary and less	0,75 of the official salary	1 of the official salary	1.25 of the official salary	1.5 of the official salary
	16,6%	9,2%	45,3%	9,4%	19,5%

Academic and teaching experience	up to 10 years	from 10 to 20 years	over 20 years
	20,7%	31,3%	48,1%

Higher education institution	%
Kyiv National Economic University named after Vadym Hetman	24,2
Lviv National Environmental University	7,9
Chernihiv Polytechnic National University	7
Uman National University of Horticulture	7,4
V. N. Karazin Kharkiv National University	45
Petro Mohyla Black Sea National University	8,6

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2.2. Academic staff's technical capacities for distance education

The situation with lecturers' access to the Internet appears to be **closer to the ideal** than that of students. However, it should be noted that in **an online survey**, lecturers with poor internet connection had a low chance of being included in the sample. The same situation was true for students, so the difference in our data can be considered relevant to reality. Hypothetically, it can be explained by the fact that there is a higher percentage of students who are abroad and therefore face problems with access to the Internet more often.

Table 2.2.1. Internet access (lecturers)

How would you rate the quality of the Internet in the place you work from?	%
There is a stationary internet connection with relatively high speed (WiFi, cable)	91,3
There is no stationary internet, but there is stable mobile internet (3G, 4G)	8,3
There is neither stationary nor stable mobile internet	0,4
Total	100

The proportion of lecturers who conduct online classes from their homes or dormitories is expected to be equal to the proportion of those who use a stationary high-speed internet connection. It is worth noting that **about a quarter of lecturers also teach from their university premises**.

Table 2.2.2. Place of access to online classes (lecturers)

Usually, you conduct online classes...	%
from their home / dormitory	91,2
from the university premises	24,3
from the premises of another workplace	6,6
from public places	3,4
from friends', acquaintances', relatives' places	2,7
from transport	0,9

**respondents could choose several options, so total is >100%*

Lecturers of LNEU and UNUH (60% each) most often conduct online classes from their workplaces at the university, while teachers of KNEU named after Vadym Hetman and V.N.Karazin KNU (14-15% each) are the least likely to do so (*see Table 2.2.3*).

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Table 2.2.3. Place of access to online classes (HEI lecturers, %)

&	**from their home / dormitory**	**from the university premises**
KNEU named after Vadym Hetman	94,1	14,6
LNEU	73,1	59,2
Chernihiv Polytechnic NU	89,7	39,1
UNUH	68,6	59,5
V.N. Karazin KNU	96,8	14,4
Petro Mohyla BSNU	90,7	29,1

**respondents could choose several options, so total is >100%*

More than 92% of all surveyed lecturers have not only smartphones but also some kind of laptop at their disposal (*see Table 2.2.4*). In terms of all devices, lecturers are ahead of students, except for smartphones, which are available to almost every student surveyed; this difference is most noticeable in the case of desktop computers: this type of equipment is almost one and a half times more common among academic staff than among students.

Table 2.2.4. Access to devices (lecturers)

What devices do you have available to you to regularly join online classes?	%
Smartphone	93,5
Laptop / netbook / ultrabook	92,4
Desktop computer	44,3
Tablet computer	28,4

**respondents could choose several options, so total is >100%*

Computers are preferred for online classes by the majority of lecturers - **almost 95% always or often use desktop computers**, while only 16% use smartphones for this purpose with any frequency (*see Table 2.2.5*). It can be argued that **the use of smartphones for online classes** (which is also less popular among students than the use of computers) **is generally a marginal practice for lecturers.**

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Table 2.2.5. Devices used to access online classes (lecturers)

What devices do you usually use to access online classes?	%
Almost always using a smartphone	2,5
Mostly using a smartphone, but sometimes a computer or tablet	2,9
Mostly using a computer or tablet, but sometimes a smartphone	11,3
Almost always using a computer/laptop	83,3
Total	100

Different categories of academic staff differ rather little in terms of available technology: there is no difference by gender, university or share of salary. The only regularity that can be noted is that younger employees (both in terms of position and work experience) are 4-7% more likely to use smartphones for online classes.

In general, about **14% of lecturers** believe that their **working conditions** for distance education **are not ensured** to some extent (*see Table 2.2.6*). Based on the lecturers' answers about the availability of equipment for online classes, it can be assumed that this is not a question of technical conditions. However, the analysis of the bivariate distribution of answers to the question about working conditions and the question about the availability of devices for online access demonstrates a certain connection.

Table 2.2.6: Ensuring working conditions (lecturers)

Could you please assess the extent to which your working conditions are sufficient for online learning?	%
The conditions of your work in an online mode **are fully ensured**	49,4
Some conditions **are not ensured,** but you can **solve** this **yourself**	37
Certain conditions **are not ensured**, there is a need for **assistance from the university**	11
There are few or **no conditions** for online work	2,6
Total	100

Thus, **the availability of a desktop computer for work consistently decreases depending on the level of working conditions**: among lecturers whose working **conditions** in an online mode are **fully ensured**, **49% have a desktop computer,** while among those who believe that their working **conditions** are **poorly ensured or not**

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ensured at all, **only 34% have a desktop computer**. The same is true for **tablets**: the rate of their availability **decreases from 32% to 19%**.

At the same time, **the lowest rates of smartphones and laptops** are in the group of lecturers who consider **only certain** working **conditions** to be poor and state the need for assistance from the university: 3-5% lower than in other groups. Since it is difficult to assume that, given the presence of a laptop, the absence of a desktop computer (or, moreover, a tablet) leads to "complete insecurity of working conditions", the following hypothesis should be put forward. The response " there are few or no conditions for online work" is rather an embodiment of a certain ideological credo, while **those who mention the need for assistance from the university rely on specific technical problems in their answers**.

The largest (58%) **percentage of those satisfied** with the working conditions in an online mode is among the teachers of the **CPNU** and **UNUH** (*see Table 2.2.7*). The number of **lecturers** who believe that their working conditions in an online mode are **almost not ensured or not ensured at all** is the highest at **KNEU** (5%). In general, the lecturers of this particular university provided the most sceptical assessments of the adequacy of their working conditions in an online mode: a total of **60% of KNEU lecturers see some degree of insecurity in their working conditions in an online mode**.

Table 2.2.7. Ensuring working conditions (HEI lecturers, %)

&	KNEU named after Vadym Hetman	LNEU	CPNU	UNUH	V.N. Karazin KNU	Petro Mohyla BSNU
The conditions of your work in an online mode **are fully ensured**	40,3	43,7	**58,1**	**57,6**	52,5	50,6
Some conditions **are not ensured,** but you can **solve** this **yourself**	**40,3**	**39,4**	30,6	33,3	36,1	**39**
Certain conditions **are not ensured**, there is a need for **assistance from the university**	**14,4**	**14,1**	9,7	7,6	9,7	7,8
There are few or **no conditions** for online work	**5,1**	2,8	1,6	1,5	1,7	2,6
Total	100	100	100	100	100	100

About **29% of lecturers** said that they faced **a lack of stable access to the Internet** during online classes (*see Table 2.2.8*), and 20% had problems with the equipment, either too old or not having a built-in webcam. **The inability to install the necessary software**, reported by **10%**, also indicates certain **technical difficulties**, although this may also be a manifestation

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of insufficient skills in working with technology, as, for example, in the case of online technologies, as reported by 13.5% of lecturers.

Table 2.2.8. Problems in distance education (lecturers)

What difficulties have you encountered in teaching academic disciplines using online technologies?	%
Increased financial costs (internet and mobile phone bills, purchase of hardware or software)	38,1
Lack of stable access to the Internet	28,7
Lack of proper technical equipment (old computer or laptop, no webcam, etc.)	20,1
Lack of necessary skills to work with online technologies	13,5
Inability to install the required software	10,1

**respondents could choose several options, so total is >100%*

Predictably, **more than 90% of lecturers believe** that it is **important** for **students to turn on** their **cameras** during online classes to some extent; however, only 23% require it all the time, while the rest either do not require it at all or require it only in certain situations (*see Table 2.2.9*). There are even some lecturers who are disturbed by student cameras and ask not to turn them on; but such lecturers make up less than a percentage of the respondents.

Table 2.2.9. Webcam usage during online classes (lecturers)

How important is it to you that students turn on their cameras during online classes?	%
This is very important, so you request it to be on	22,6
This is important, but you do not request it	32,9
This is important in certain situations, and then you request it	35,3
This is not very important at all, so you do not request	8,3
It is even disturbing, so you can ask not to turn it on	0,9
Total	100

Lecturers were also asked an open-ended question about what they **lack in terms of distance learning that the university could help with**. The following typical needs were identified as a result of summarising the responses:

- laptop/tablet: many lecturers need their own laptop or tablet to work with; some report that their own devices are outdated and need to be updated;

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- Internet: high-speed and stable Internet is an important aspect; lecturers complain about poor connection quality or Internet failures;
- equipment: some respondents mentioned the need for special equipment, such as webcams, headsets, graphics tablets, etc.;
- software: lecturers need licensed software to conduct quality classes and improve work efficiency;
- resources and support: lecturers express a desire to receive support from the university or support services that would help with current issues related to the organisation of the workflow;
- electricity supply and working conditions: some lecturers point out the instability of electricity supply, the need for separate classrooms with appropriate technical equipment and comfortable working conditions;
- miscellaneous: in addition to the above problems, funding, payment for communication services and optimisation of class schedules are also mentioned.

In fact, most of the self-identified needs for distance education relate to the material and technical support of the teaching process.

2.3. Academic staff's assessment of communication platforms and channels

A lecturer working in an online mode "feels" distance education through the filter of working platforms and means of communication with students and administration. That is why it is important for lecturers to evaluate such software. It is immediately apparent that lecturers **do not share the same opinion about the need for specialised software systems** for distance education (*see Table 2.3.1*): their strong supporters are almost three times as many as their staunch opponents (14% vs. 5%), but almost half of the respondents believe that this need is situational or partial, and moderate supporters of certain LMS platforms are not so obviously prevailing over moderate opponents (22% vs. 16%).

Table 2.3.1. The need for specialised platforms for distance education (lecturers)

Is there a need for specialised software systems (learning management systems, LMS) to implement distance education?	%
Definitely not	4,6
Most likely not	16,3
In some respects, and in others not	43,7
Rather, yes	21,8
Definitely yes	13,6
Total	100

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Regarding **the choice of a platform for organising online learning**, half of the lecturers believe that this choice should be made by each lecturer separately, and a little more than a third (36.1%) consider it appropriate to have a centralised choice of platform for the whole university. The options of choosing a platform "separately by each department" and "separately by each faculty" received only 7% each. **Zoom** is the leader in the ranking of **universal platforms** used for online classes: like students, almost all lecturers use this platform, and **more than 80% consider** it **convenient**.

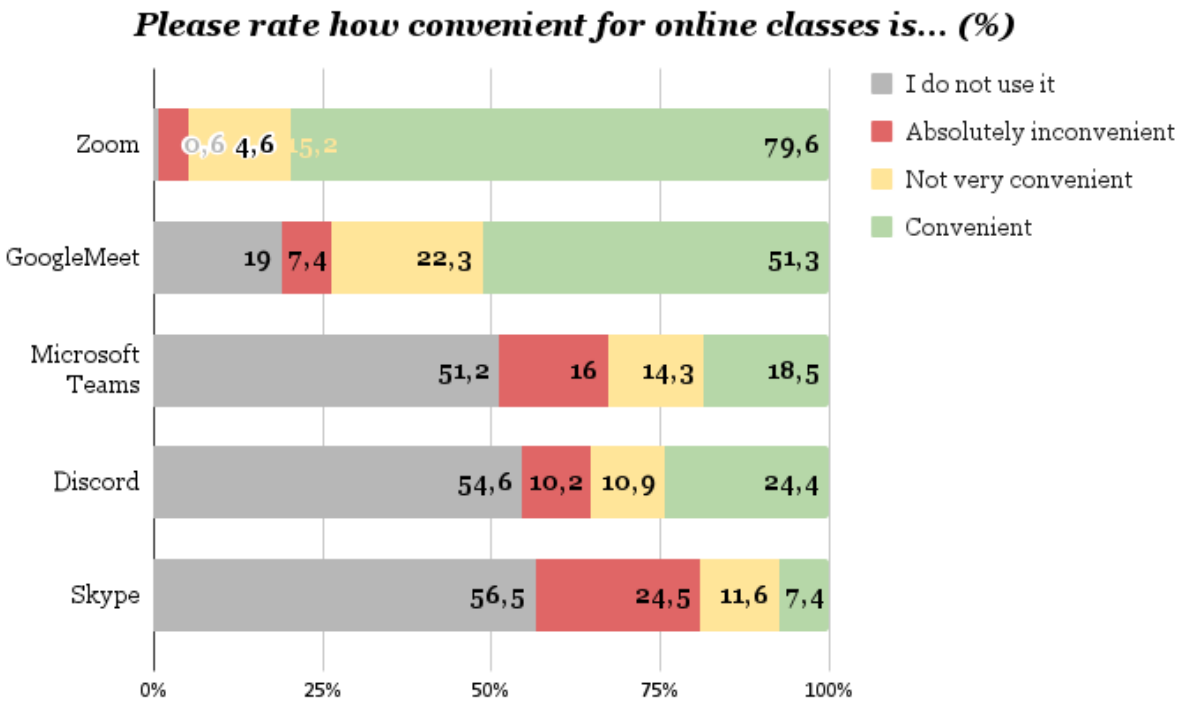

Fig. 2A

The positive assessment of the **Google Meet** platform is almost identical to that of students - 47% of lecturers consider it convenient; however, more than a third do not use it at all (among students, the number is less than 20%). The absolute anti-leader among lecturers is the **Discord** platform - more than 81% of respondents do not use it. Even **Skype** is not ignored to such an extent among students; however, only 32% of lecturers use it. The opinions of lecturers and students on **Microsoft Teams** were the closest: 41% of lecturers use it (48% of students) and 20% consider it convenient (19% of students). It should be noted that in a separate question, 11% of lecturers said that they had experienced the general inconvenience of platforms (e.g. Moodle, Office 365) for online classes while teaching in an online mode.

Lecturers from different HEIs differ somewhat in their assessments of universal platforms (*see Table 2.3.3*). For example, lecturers of CPNU give a significant preference to Microsoft Teams compared to all other HEIs (even KNEU and LNEU, where this platform is also in demand); at the same time, the index of acceptability of GoogleMeet is significantly lower for lecturers of this HEI (3.5 against the highest 7.2 for lecturers of KNU). The lecturers of the BSNU are slightly

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more inclined to approve Skype, while Microsoft Teams received the lowest index among them - along with the lecturers of the KNU - in comparison with the assessments of other HEIs.

Table 2.3.3: Index of acceptability of universal platforms for online classes (HEI lecturers, %)

&	KNEU named after Vadym Hetman	LNEU	CPNU	UNUH	V.N. Karazin KNU	Petro Mohyla BSNU
Zoom	9,1	9,6	9,3	9,7	9	9,3
GoogleMeet	5,8	4,9	3,5	5,3	7,2	6,8
Microsoft Teams	4,6	5,3	8,7	2,9	2,7	2,7
Skype	2,8	3	2,1	2,8	3,2	3,7

(acceptability index of communication channels; min=1, max=10)

Among the communication channels used by lecturers to receive and send current information and work files, **Telegram** is the leader, with more than 91% of lecturers using it and **66% finding it convenient** (*see Figure 2B*). Even more lecturers use email for the same purposes, but only 54% consider it convenient. **Viber** and **Moodle** are also considered convenient (46% and 42%); **Google Classroom** is also among the top five most convenient (almost 30% of the choice). However, while **Viber** and **Moodle** are used by more than 80% of lecturers, **Google Classroom** is used by only 55%. All other means of communication are used by less than half of the respondents, and no more than 19% of lecturers consider them convenient; **Facebook**, **Instagram** and **Discord** are obvious outsiders. The **Electronic Dean's Office** stands out somewhat: it is used by 60% of respondents, but only **18% consider it convenient**. Interestingly, students' ratings are relatively close to those of lecturers only in the case of **Telegram**. As for **Viber**, although it is used by the same proportion of students as lecturers, only **27% of students consider it convenient**. The absolute outsider for lecturers, **Discord**, **is used by more than half of the students**, and 15% consider it convenient. The difference in assessments of **Google Classroom** is interesting: 77% of students use it and 40% consider it convenient for communication, compared to 55% and 30% of lecturers, respectively.

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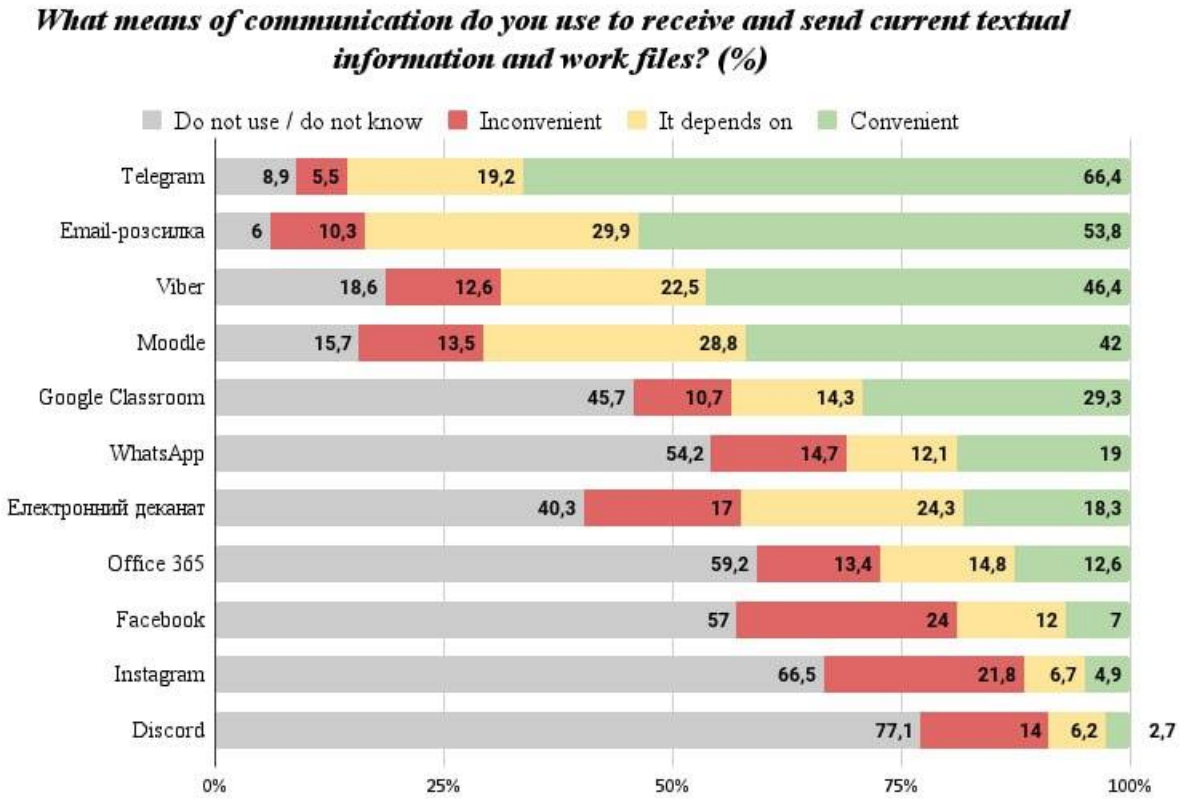

Fig. 2B

As in the case of universal platforms for online classes, the assessment of communication channels for lecturers in different HEIs also differs (*see Table 2.3.4*). Some interesting differences include:

- **Google Classroom acceptability index** is significantly **higher** for **KNU** lecturers and slightly higher for **LNEU** lecturers;
- the overall leader among the communication channels, **Telegram**, is **in less demand** among **UNUH** lecturers than among lecturers of other HEIs (index 5.8 against the highest - in KNU and BSNU - 8.8); the situation with Moodle is similar for KNU lecturers (index 5.6, while the highest - in BSNU - 9.1);
- individual channels have formed **"groups" of supporters**: for **Office 365**, these are **LNEU** and **CPNU**, for the **Electronic Dean's Office - the same universities plus KNU**;
- **Discord, Instagram, WhatsApp and Facebook are** more or less universal **outsiders**: their highest indices range from 2.5 to 4.1.

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Table 2.3.4. Communication channels (academic staff of different HEIs, %)

&	KNEU named after Vadym Hetman	LNEU	CPNU	UNUH	V.N. Karazin KNU	Petro Mohyla BSNU
Telegram	8,3	7	8,6	5,8	8,8	8,8
Moodle	7,2	8	8,5	8,6	5,6	9,1
Email-distribution	8,4	8,6	7,3	8,1	7,9	7
Google Classroom	3,6	4,5	2,5	2,6	6,6	3,3
Viber	7,1	8,6	6,1	8	6,5	6,5
Discord	1,8	2,5	1,9	2	2	2,4
Electronic dean's office	3,6	5,2	5,8	3	5,5	2,9
Instagram	2,2	3,1	2,4	2,3	2,5	2,9
Office 365	4	6,1	5,1	3,1	2,5	2,9
WhatsApp	4,1	3,9	2,5	3,1	4,1	3,9
Facebook	2,8	3,9	2,7	2,5	3,1	3,6

(acceptability index of communication channels; min=1, max=10)

Finally, there is a hint of a gender connection: **men are less active in using** almost all **universal** online learning **platforms and** communication **channels**; at the same time, they **rate** all of them **lower** than women, with a difference of 4-7%. The only exceptions to this trend are Discord, Facebook Office 365, and Microsoft Teams.

2.4. Academic staff's perceptions of work formats

For lecturers, distance education often means, first and foremost, the need to change their own preferences for certain forms of teaching and control. Often, lecturers are motivated by the desire to reduce the distance between distance education and the traditional learning environment. Therefore, it can be assumed that the preference for synchronous elements is one of the reasons for the **absolute leadership of online lectures with presentation** among the various forms of teaching: 87% of lecturers consider them effective. This is almost twice as much as for the Moodle distance course, which ranks second in terms of effectiveness (*see Table 2.4.2*).

However, it should be noted that the effectiveness of different forms is layered (the question allowed simultaneous selection of different answer options), and some lecturers may consider other proposed options as a kind of "supplement" to the "main" form - online lectures with presentation. This may explain the relatively high popularity of electronic interactive materials as well as textbook and manual files (38-39% consider them effective). At the same time, it is

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obvious that the **low level** of recognition of **audio recording of the lecture** or the same online lectures without presentations as effective (5% and 11% respectively) is indicative regardless of the specifics of the interpretation of the issue by certain groups of respondents.

Table 2.4.2. Effective forms of presenting material in an online mode (lecturers)

What forms of teaching do you consider to be the most effective in online learning?	%
Online lecture with presentation (PowerPoint, etc.)	86,8
Moodle distance learning course	46,8
Interactive electronic materials	38,6
Files from textbooks, manuals on the topic	37,6
Brief lecture outline	28,9
Video recording of the lecture	27,9
Files from articles and monographs on the topic	22,9
Video tutorials and screencasts	17,2
Online lecture without presentation	11,4
Audio recording of the lecture	4,6

**respondents could choose several options, so total is >100%*

Notably, the **percentages** of respondents who **consider online lectures with presentations and Moodle distance learning courses to be effective are almost identical among lecturers and students**; however, video recordings of lectures (55%) and brief lecture outlines (60%), which are popular among students, are not often considered effective by lecturers (28% and 29%, respectively). It can be assumed that the lecturers' assessment of the effectiveness of these forms is negatively affected by the need to spend some additional time on their development, while textbooks and interactive materials can be borrowed from universal sources.

Lecturers from different HEIs have somewhat different ideas about the effectiveness of different forms of teaching (*see Table 2.4.3*). For example, lecturers at **LNEU**, **BSNU** and (especially) **KNU** are **less enthusiastic** about **Moodle distance learning courses** (36%-40% vs. 59%-67% at other HEIs); and at CPNU and KNU, the effectiveness of brief lecture notes is somewhat higher (35% and 32% vs. 24%-27% at other HEIs). Lecturers at **UNUH** and **LNEU are less likely to consider video recordings of lectures to be effective** (15%-18% vs. 27%-37% at other HEIs), while lecturers at **CPNU** are **particularly sceptical about online lectures without presentations** and equally **optimistic about video tutorials** and screencasts. The attitude of KNEU and KNU lecturers to the generally rather outsider files from articles and monographs on the topic is also atypically optimistic (25%-29% vs. 10%-16% in other HEIs).

Table 2.4.3. Effective forms of presenting material in an online mode (HEI lecturers, %)

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&	KNEU named after Vadym Hetman	LNEU	CPNU	UNUH	V.N. Karazin KNU	Petro Mohyla BSNU
Online lecture with presentation	85,8	87,6	93,7	89,5	85,3	88,7
Moodle distance learning course	59,4	40,3	69,5	67,3	35,6	39,7
Interactive electronic materials	37,4	22,4	32,8	29,5	43,5	43,7
Files from textbooks, manuals on the topic	38,6	23,9	30,5	21,8	45,3	27,2
Brief lecture outline	25,2	25,9	34,5	23,6	31,8	27,2
Video recording of the lecture	31,9	14,9	31	18,2	27,4	37,1
Files from articles and monographs on the topic	25,2	10,4	11,5	10,5	29,1	15,9
Video tutorials and screencasts	15	14,9	24,7	11,4	18,2	19,2
Online lecture without presentation	6,3	7	4,6	9,1	15,4	16,6
Audio recording of the lecture	4,3	1	1,1	4,5	5,5	7,3

Among the forms of student work and control of their progress, **lecturers prefer oral answers and presentations and reports during classes** (68% and 63%). Control tests are slightly less popular (56%); none of the other forms gained more than half of the votes (*see Table 2.4.4*).

Table 2.4.4. Desired forms of work and knowledge control (lecturers)

What forms of assignments do you prefer?	%
Oral answers, discussions during classes	68,2
Presentations and reports during classes	62,8
Control tasks in a test format	55,9
Group assignments during seminars (practice) and laboratory classes	45,8
Homework (papers, analytical notes, essays, etc.)	44,1
Group homework, projects	32,1
Other	4,3

**respondents could choose several options, so total is >100%*

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It is worth noting that **synchronous forms of work** were **the most desirable**; this corresponds to the distribution of answers to the question about the ratio of synchronous and asynchronous components already mentioned in Table 2.4.1. The students who gave a relative preference to control tests (63%) were probably guided by a slightly different logic, because the lecturers' leader - oral answers - was desirable for only 35%, which is almost twice less than the corresponding lecturer's indicator.

Preferences for forms of work and knowledge control traditionally differ depending on the HEI (*see Table 2.4.5*). **The overall leader is oral answers,** which are preferred by 62-76% of lecturers in most HEIs, while at CPNU only 50% of the students choose them. However, not very popular group assignments at seminars in this HEI and KNEU are preferred by 50-52%. **Lecturers at KNU** especially **prefer homework** (essays, papers), which are unpopular in other HEIs - 51% against a maximum of 42% in other HEIs; and at **KNEU**, **group homework projects** are somewhat more popular than in other HEIs (44% against 12-35%). Finally, lecturers at LNEU, BSNU and CPNU are less likely to use control tests (43-47% vs. 58-61% at other HEIs).

Table 2.4.5. Desired forms of work and knowledge control (HEI lecturers, %)

&	**KNEU named after Vadym Hetman**	**LNEU**	**CPNU**	**UNUH**	**V.N. Karazin KNU**	**Petro Mohyla BSNU**
Oral answers, discussions during classes	65,7	61,7	50	62,3	71,1	75,5
Presentations and reports during classes	70,1	52,2	50,6	55,9	64,2	51,7
Control tasks in a test format	57,5	44,3	47,7	61,4	58,5	43
Group assignments during seminars (practice) and laboratory classes	51,6	36,8	50,3	36,5	44,3	43,7
Homework (papers, analytical notes, essays, etc.)	39,9	28,4	40,2	34,1	50,5	42,4
Group homework, projects	44,1	12,4	34,5	17,3	30,3	31,1

It is worth noting that **58% of lecturers** said that during online teaching they **faced difficulties in controlling students' independence in completing** current and control tasks. This is likely to play a role in the preference for oral information and reports during classes, when students can be required to turn on their cameras. However, 31% of lecturers

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faced difficulties in identifying students during classes, tests, and exams, which indirectly indicates the non-universal effectiveness of visual control. In addition, 28% of lecturers faced difficulties in adapting their discipline for online teaching, and 21% faced a lack of special teaching materials to ensure online learning.

Through the prism of the difficulty of controlling the independence of work and identifying students during distance education, it is interesting to see the lecturers' assessment of the impact of distance education on the situation with academic integrity (see Table 2.4.6). Despite the fact that half of the respondents do not see any correlation between the online mode and the situation with academic integrity, **41% of lecturers believe that the transition to online learning makes it more difficult to verify compliance with academic integrity standards**.

Table 2.4.6. Impact of вшіефтсу education on academic integrity (lecturers)

Does the transition to online learning affect the situation with academic integrity?	*%*
Yes, it **makes** it **easier** to monitor compliance with academic integrity standards	9,3
Yes, it **makes** it **difficult** to verify compliance with academic integrity standards	**41,1**
No, this transition **does not have** a fundamental **impact** on academic integrity	49,6
Total	100

All these indicators can further explain the attitude towards the development of specific assessment systems for distance education. Almost **70% of lecturers believe that a specific assessment system for distance education is not needed**, traditional forms are sufficient. However, more than a quarter of the respondents are in favour of supplementing traditional forms of assessment with specific elements. However, the share of supporters of an independent assessment system for distance education allows us to recognise this position as marginal:

Table 2.4.7. Additional assessment system (lecturers)

Does distance education require a specific assessment system?	*%*
No, **the forms** of assessment **used** in full-time and part-time education are sufficient	68,5
Yes, it is necessary to **supplement the existing** evaluation forms with specific elements	25,8
Yes, it is necessary to **create** completely **independent** forms of assessment for distance education	5,7
Total	100

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However, the following interesting patterns should be noted:

- those lecturers with less than ten years of work experience were on average 3-6% more likely to indicate the need to create completely independent forms of assessment for distance education;
- those who believe that completely independent forms of assessment are necessary for distance education are 5-10% less likely than others to have encountered a lack of proper technical equipment, stable Internet access and special teaching materials;
- at the same time, this small group of lecturers was 5-10% more likely to encounter difficulties in identifying students during classes, tests, and exams.

It can be assumed that the position of the proponents of creating completely independent forms of assessment for distance education is to some extent "hermetic" in terms of taking into account the changing external circumstances under which most lecturers have to operate when teaching in an online mode; and the "hermetic" focus on the learning process as a hermetic process radicalises their position on independent forms of assessment to some extent.

2.5. Academic staff's perceptions of workload during distance education

Workload indicators are usually one of the most important criteria for assessing efficiency and forming attitudes towards certain forms of professional activity. Almost all lecturers were divided into four relatively even groups (from 21% to 23%) in terms of the amount of required **working time per week**.

Table 2.5.1. Amount of time spent on work (lecturers)

How much time do you spend on average on online learning (conducting classes, preparing, checking assignments, etc.)?	%
Up to 5 hours per week	2
From 5 to 10 hours per week	9,7
From 10 to 20 hours per week	**21,4**
From 20 to 30 hours per week	**21,9**
From 30 to 40 hours per week	**23,1**
From 40 hours per week and more	**22**
Total	100

There is a relatively expected relationship between time commitment and formal characteristics, such as work experience, position and share of salary. Thus, **lecturers** whose salary share is equal to or exceeds the **full-time rate** are more likely to say that they have to spend **more**

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than 30 hours a week on work: among full-time lecturers, 47%; among those who work on 1.25 official salaries, 49%; among those with 1.5 official salaries, 65%. For comparison: among those who work for 0.25 and 0.5 salaries, the number is only 17%.

Table 2.5.2. Amount of time spent: correlation with the share of the official salary (lecturers, %)

How much time do you spend on average on online learning (conducting classes, preparing, checking assignments, etc.)?	**Share of the official salary**					
	0,25 of the official salary	**0,5 of the official salary**	**0,75 of the official salary**	**1 of the official salary**	**1,25 of the official salary**	**1,5 of the official salary**
Up to 5 hours per week	10	3,3	3,6	1,5	2,4	0,6
From 5 to 10 hours per week	36,7	24,2	8,4	6,7	4,8	4,6
From 10 to 20 hours per week	26,7	35	27,7	20,5	14,5	13,7
From 20 to 30 hours per week	10	20	19,3	24,7	28,9	16,6
From 30 to 40 hours per week	3,3	10,8	22,9	25,9	22,9	28,6
From 40 hours per week and more	13,3	6,7	18,1	20,7	26,5	36
Total	100	100	100	100	100	100

The relationship with the position is similar: **among associate professors and professors, 49% each work more than 30 hours per week**, while among assistants, lecturers and senior lecturers, the figures range from 28% to 37% (*see Table 2.5.3*).

Table 2.5.3. Amount of time spent: correlation with the position (lecturers, %)

How much time do you spend on average on online learning (conducting classes, preparing, checking assignments, etc.)?	**Посада**			
	Assistant, lecturer	**Senior lecturer**	**Associate professor**	**Professor**
Up to 5 hours per week	2,5	2,2	1,9	1,3
From 5 to 10 hours per week	17,3	13,3	7	11,8
From 10 to 20 hours per week	**27,2**	**24,4**	20	20,4
From 20 to 30 hours per week	**24,7**	**23**	22,4	17,8
From 30 to 40 hours per week	14,8	20	**24,5**	**25**
From 40 hours per week and more	13,6	17	**24,1**	**23,7**
Total	100	100	100	100

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In terms of work experience, the dividing line is 10 years: two-thirds of those with less work experience work less than 30 hours per week; among those **who have worked for more than ten years, almost half (48%) work more than thirty hours per week** (*see Table 2.5.4*).

Table 2.5.4. Amount of time spent: correlation with work experience (lecturers, %)

How much time do you spend on average on online learning (conducting classes, preparing, checking assignments, etc.)?	**Work experience**		
	up to 10 years	**from 10 to 20 years**	**over 20 years**
Up to 5 hours per week	1,6	2,1	2,1
From 5 to 10 hours per week	16,1	6,4	9,1
From 10 to 20 hours per week	**26,9**	18,9	20,7
From 20 to 30 hours per week	21,5	24,6	20,2
From 30 to 40 hours per week	17,7	**25,4**	**24**
From 40 hours per week and more	16,1	**22,5**	**24**
Total	100	100	100

Answers to a separate question about personal experience of online teaching show that, **according to 57% of lecturers, additional working time and work is required to adapt practical and laboratory work**. Purely formal preparation of methodological support also creates an additional amount of work, but only 37% of lecturers say this.

Comparative assessments of workload in different forms of education are even more revealing. Lecturers were asked to provide such estimates for themselves and for students. And while more than half of the lecturers consider the workload for students to be approximately the same, **almost half of the lecturers consider their teaching workload to be higher in an online format** (*see Table 2.5.5*). Together with the 44% of those who report less extracurricular work in the full-time format, this suggests a tendency for lecturers to **assess online learning as increasing their workload**.

Table 2.5.5. Comparison of study formats in terms of workload (lecturers, %)

&	***in full-time (daytime) format***	*approximately the same*	***in an online format***
Less extracurricular work, homework checking…	**44,2**	45,2	10,7
More workload for students…	22	**55**	23
Lecturers have more work to do…	10,2	40,9	**48,9**

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This trend is eloquently confirmed by the answers to the direct question about the assessment of changes in workload during online learning (*see Table 2.5.6*). The distribution of lecturers' assessments of changes in student workload is relatively trivial: the total share of those who consider student workload to have increased to some extent is almost twice as high as the share of those who have noticed some decrease in workload, but the most significant of the uncombined indicators is the share of those who do not see any changes. On the other hand, **78% of lecturers report an increase and a noticeable boost in teaching workload during online learning**.

Table 2.5.6. Assessment of changes in workload during online learning (lecturers, %)

In your opinion, has the workload changed in terms of online learning compared to face-to-face learning?	**Lecturers about students**	**Lecturers about lecturers**
Yes, it has increased significantly	13,7	**46,5**
Yes, it has increased slightly	26,8	31,9
No, it hasn't changed	**36,3**	17,1
Yes, it has decreased slightly	18,2	3,6
Yes, it has decreased significantly	5	0,9
Total	100	100

Lecturers' assessments of changes in their workload demonstrate a dependence on work experience, position and gender:

- the higher work experience, the higher the percentage of lecturers who say that teaching workload has significantly increased during online learning: while **36%** of those with **less than 10 years of experience** chose this answer, **53%** of lecturers **with twenty years of experience** did so**;**
- the same applies to the position: **60% of professors reported that their workload has increased significantly**, while **among assistants, lecturers and senior lecturers, the figures ranged from 33% to 39%**;
- **women more often (51%) reported** a noticeable **increase in workload** compared to men **(38%)**.

Lecturers also had the opportunity to assess changes in time spent on different types of work (*see Table 2.5.7*). Individual consultations turned out to be a relatively "stable" type: the shares of lecturers who did not notice changes and those who did are equal. **The most frequently reported increases in time spent on conducting classes** (62% of lectures and 70% of seminars and practical classes), **as well as on checking students'** independent **work** (67%).

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Table 2.5.7. Assessment of changes in time spent in different forms of education (lecturers, %)

Has the actual time spent on the following types of teaching activities in a combined/online mode changed:	**Yes, it has increased / significantly increased**	**No, it hasn't changed**	**Yes, it has decreased / significantly decreased**	Total
Preparing and conducting lecture classes	**62,3**	36	1,7	100
Preparation and conducting of classes (seminars, practice, laboratory)	**69,7**	28,5	1,8	100
Conducting individual/consultation classes	48,3	**47,5**	4,2	100
Checking students' independent work	**66,6**	28,7	4,6	100
Checking control (module) works (current tests)	50,2	38,8	**11**	100
Preparation and checking of the final control (in the form of a test/exam)	51,1	37,9	**11**	100

At the same time, half of the lecturers increased their actual expenses for the preparation and checking of the final test, as well as for the checking of test papers, while 11% each decreased them. It can be assumed that this is due to the increased use of automated test checking systems.

However, it should not be assumed that the increased workload of lecturers during distance education leads to a decrease in their pedagogical responsibility. As can be seen from Table 2.5.8, **the majority of lecturers (78%) are ready to help students even in their non-working hours**. This indirectly indicates that the increase in time spent by lecturers is not related to their direct pedagogical tasks, and this is probably why they are concerned.

Table 2.5.8. Readiness to spend extra time to help students (lecturers)

Are you ready to help distance learning students during and after working hours?	%
NOT ready at all	4,7
Rather, NOT ready	18
Rather, ready	46,6
Ready	30,7
Total	100

A closer look at the data presented in Table 2.5.8 reveals the following conclusions:

- the majority of lecturers (31%) expressed a confident willingness to help distance learning students at any time;

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- a significant proportion of lecturers (47%) consider themselves mostly ready, rather than fully ready, to help beyond their working hours;
- there is a small percentage (5%) of lecturers who say that they are not ready at all to help students at any time.

So, based on this analysis, it can be stated that the majority of lecturers are ready to help students in online learning, but there are lecturers who are less ready to do so. To improve the situation, it is important to ensure that lecturers are properly trained and supported in their work with online learning, and that they are provided with the necessary resources and tools to facilitate the process of teaching and communicating with students in the online environment. It is also important to take into account the factor of non-working hours, as online learning can create blurred boundaries between the work and personal lives of lecturers. In addition to providing sufficient work support, it is also important to consider the work-life balance of lecturers, giving them opportunities to rest and recharge. Overall, understanding lecturers' readiness to support students during online learning will help to identify lecturers' needs and direct efforts to develop support and teaching resources that will facilitate effective learning and ensure that both lecturers and students' needs are met.

2.6. Academic staff's perceptions of the organisation of control and monitoring during distance education

The format of education is largely determined by the control and monitoring methods used. Lecturers were asked several questions that allowed them to reveal their positions on the assessment of the need and acceptability of specific changes in this area. Table 2.6.1 clearly demonstrates the difference in the attitude of lecturers towards student and administrative monitoring of their activities during online learning. **Lecturers are much more favourably disposed to monitoring of student assessment of their work than to video recording of lecturer's activity in class or to the presence of administration representatives in class**. More than half of the lecturers consider student monitoring to be appropriate, while the percentage of approving **of "administrative supervision"** is between 28% and 36%, and **the rate of unacceptability is 35-39%.** We should also note the large proportion of those who could not evaluate the proposed methods - 24-33%. In most cases, those who have not determined their position on such issues are distributed similarly to the general group and, as a result, do not cause significant changes in the overall distribution.

Table 2.6.1. Assessment of additional monitoring methods (lecturers, %)

Please evaluate the following methods and technologies for additional monitoring of lectures and consultations in an online mode	**I consider it unacceptable**	**I consider it acceptable**	*I can't evaluate*	Total
Joining a representative of the administration/dean's office to an online class	38,7	28,2	33,2	100

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Conducting classes exclusively on platforms with video recording of the presence and activity of the lecturer	35,4	36,4	28,2	100
Monitoring student assessment of lecturer's performance	19,6	56,4	24	100

At the same time, **65% of lecturers are not ready to introduce additional elements of monitoring for classes** in online learning, as they consider even the existing bureaucratic burden too high (see Table 2.6.2). Only 3% of respondents are definitely ready to introduce such elements.

Table 2.6.2. Attitudes towards additional forms of class monitoring (lecturers)

Are you ready for additional elements of classes monitoring in an online format?	*%*
No, the bureaucratic **burden** on lecturers is already **too high**	64,5
It depends on the specific number of these additional elements	32,5
Yes, ready, this format **requires additional monitoring elements**	3
Total	100

At the same time, **57% of lecturers see the need to change the monitoring of their workload** to take into account the peculiarities of online learning, and only 15% say that they do not need such changes (*see Table 2.6.3*). In contrast to the monitoring of classes, which is likely to be perceived by lecturers as a form of administrative control (i.e. external pressure), changes to the workload monitoring procedure may be perceived as a means of correcting the existing inequities in the procedure to take into account the additional workload of lecturers. It is worth recalling the tendency noted in subsection 2.5 that the majority of lecturers notice an increase in their own workload during distance education. Based on this, it can be assumed that lecturers who speak in favour of changes in the procedure for monitoring teaching workload hope that this increase will be taken into account.

Table 2.6.3. Assessment of the need for changes in workload monitoring (lecturers)

Does the procedure for monitoring lecturers' workload need to be changed in view of the peculiarities of online learning?	%
Yes, it does	57,2
No, it does not	14,5
I don't know / Hard to answer	28,3
Total	100

Indirectly, the peculiarities of the workload during distance education can be judged based on the answers to the question about the frequency of departmental online meetings (*see Table*

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2.6.4). 66% of the surveyed lecturers indicated that such meetings take place at their departments several times a month; and **11% reported departmental online meetings several times a week**. Regardless of the extent to which these estimates are true, there are reasons to assume that the teaching life is overloaded with formal events (as it is unlikely that regular departmental online meetings can be mostly informal).

Table 2.6.4. Frequency of a department's online meetings (lecturers)

How often does your department hold online meetings?	%
Several times per week	11,1
Several times per month	65,9
Several times per term	20,9
Several times per year	1,5
No online meetings are held	0,6
Total	100

2.7. Professional development and copyright

Among the difficulties faced by lecturers in teaching courses in an online mode, only 14% mentioned a lack of skills to work with online technologies. However, **the need for organised professional development** in the use of digital technologies required for distance education **was acknowledged by 40% of lecturers** with different motivations, and another 20% indicated that such a need would depend on specific circumstances (see Table 2.7.1). This is quite easy to explain, as it is not about the need for in-service training as such, but rather about its basis. Lecturers **are reluctant to admit** that **their skills are insufficient**, but they are more willing to cite the high speed of digital development: 37% of lecturers mentioned this as the reason for their need for advanced training.

Table 2.7.1. Assessment of the need for organised professional development (lecturers)

Do you feel the need for organised professional development in the use of digital technologies required for distance education?	%
No, because I have the necessary level of knowledge of these technologies	19,8
No, I can improve my knowledge on my own if necessary	19,4
I'm not sure, it depends on the circumstances	20,4
Yes, because digital technologies are developing very quickly	37
Yes, because there are difficulties with the use of technologies	3,4
Total	100

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Lecturers had the opportunity to specify their needs for professional development; for this purpose, they were asked to evaluate specific areas of professional development through the prism of their personal interest (*see Table 2.7.2*). It is worth noting that **the most useful** professional development **for lecturers is in new methods of teaching in an online format, skills in preparing video materials, video recording and working with video editors**. In each of these areas, 49-51% of lecturers indicated a deep interest; the total interest (of varying degrees) in these areas ranged from 83% to 91%. However, the skills of working with a camera and microphone, developing diction and acting are in much lower demand: more than a third of respondents indicated a complete lack of interest in these areas.

Table 2.7.2. Interest in areas of professional development (lecturers, %)

Please assess which areas of professional development would be interesting and useful for you	Not interesting at all	Interesting, but not too much	Very interesting	*Total*
New methods and approaches to teaching in an online format	9,3	39,8	**50,9**	100
Video production and recording skills	12,7	38,3	**49**	100
Skills in working with video editors, editing	17	33,1	**49,9**	100
Acting, performing in front of the camera	**34,4**	40,6	25	100
Skills in developing diction and working with a microphone	**35,9**	38,3	25,8	100

A special topic within the distance education issue is the protection of the **copyright** of lecturers as producers of unique educational content. Several questions were asked of lecturers on this topic. It turned out that almost 60% of lecturers are more or less ready to develop online courses with a significant amount of copyrighted video content to be posted on learning platforms; however, **more than 40% of lecturers are not ready to share their educational video content** (*see Table 2.7.3*).

Table 2.7.3. Readiness to produce original video content (lecturers, %)

Are you ready to develop fully functional online courses containing a significant amount of original video content to be placed on online learning platforms?	*NOT ready at all*	*Rather, NOT ready*	*Rather, ready*	*Ready*	Total
	9,7	31,2	43,9	15,3	100

Answers to the next question showed that the biggest obstacle to creating and uploading copyrighted educational video content to the Internet is the additional time spent, as indicated by 58% of lecturers (see Table 2.7.4). But the second place (**45%** of answers) was taken by **the threat to copyright**.

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Table 2.7.4. Attitudes towards posting educational materials on the Internet (lecturers)

In an online learning mode, there is a need to make learning materials (presentations, videos, etc.) available on the Internet. What are you most concerned about?	%
It requires **additional time spent** on work	57,8
It **endangers** your **copyright**	45,1
It **limits** the necessary **contact with students**	27,4
It **interferes with** the productive **learning** of students	11,7
None of the above	15,7

**respondents could choose several options, so total is >100%*

However, when asked about the need for special regulation of intellectual property rights of lecturers who create learning content for distance education, only **25% confidently answered "yes, it is necessary"** (see Table 2.7.5). This figure is almost twice as low as the share of those lecturers who expressed fears of threats to their copyright. However, 45% believe that it is necessary to improve the procedures for regulating intellectual property rights. A total of **70% believe that it is advisable to improve legal procedures** specifically for distance education; therefore, the issue is very significant.

Table 2.7.5. Attitudes towards special regulation of copyright for lecturers (lecturers, %)

Do the intellectual property rights of lecturers who create learning content for distance education require special regulation?	*%*
No, there are sufficient procedures for regulating intellectual property rights for both full-time (face-to-face) and part-time education	30,3
Yes, it is necessary to refine the procedures for regulating intellectual property rights, taking into account the peculiarities of online form	44,7
Yes, separate procedures for regulating intellectual property for distance education are needed	25
Total	100

2.8. Academic staff's assessments of the effectiveness of distance education

The general attitude of lecturers to distance education includes both professional assessments of effectiveness and emotional reactions. However, **the transition to online learning did not cause much emotion for the majority of lecturers (53%)** (*see Table 2.8.1*). At the same time, it should be noted that there were much fewer lecturers who were happy about this transition than students (15% vs. 37%), while for those who were unhappy, the situation was the opposite: 23% of students and 33% of lecturers chose this reaction.

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Table 2.8.1. Reaction to the transition to online learning (lecturers)

What emotions did the transition to online learning cause you?	%
I was **upset and disappointed** by this transition	32,7
It **caused** almost **no emotions**	**52,5**
The transition was **satisfying and joyful**	14,7
Total	100

The highest proportion of those who felt happy about the transition to online learning was among KNEU lecturers, the lowest - among lecturers of **Chernihiv Polytechnic NU** and **Petro Mohyla BSNU**: the figures in these universities differ from the overall ones by 4-9%. There is also a dependence on the position: **professors are the most disappointed**, while assistants and lecturers are more likely to be happy about the transition to online learning (the figures for these groups differ from the overall figures by 6-10%). In general, it is not surprising that **the share of lecturers disappointed with the transition** to online learning **is** significantly **higher** than the corresponding share of students. After all, **48% of lecturers believe that the traditional, face-to-face format of teaching is more psychologically comfortable**, and **71% believe that it is in the face-to-face format that it is easier to establish friendships and work relationships** (*see Table 2.8.2*).

Table 2.8.2. Social and psychological comparison of learning formats (lecturers, %)

&	**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	**Total**
Psychologically more comfortable...	**47,6**	36,2	16,1	100
Causes more fatigue...	19,5	43,2	37,4	100
It is easier to establish friendships and work relationships...	**70,9**	26	3,1	100
It is more pleasant to work...	**53,4**	37,3	**9,3**	100

Even those who believe that online learning is more tiring are almost twice as likely as those who see more fatigue in the face-to-face format - 37% vs. 20%. Therefore, **an online format is emotionally disadvantageous** for lecturers.

This attitude is reinforced by the answers to the question of which format is more pleasant to work in: **53% of lecturers say that it is more pleasant to work in a face-to-face format**, while less than 10% are emotional supporters of an online format.

Professional - rational - **assessments by lecturers of the effectiveness** and quality of different learning formats are also generally **not in favour of an online format**. Thus, **62%**

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of lecturers believe that higher quality education is provided in the traditional, face-to-face format (*see Table 2.8.3*). The same applies to seminars and laboratory classes, which 58% of lecturers consider to be better in the face-to-face format. And although 34% believe that students are more likely to miss classes during face-to-face classes (only 20% share the opposite opinion), 56% say that students are more active in class (if they have already come to the classroom). At the same time, **44% of lecturers face difficulties in organising the working environment in an online format** (only 7% chose this option in the traditional format). Even in those cases where the largest share of respondents do not see a difference between the formats, negative assessments of an online format significantly outweigh the corresponding assessments of a face-to-face format. For example, 38% of lecturers believe that lectures are better in the face-to-face format, while only 20% favour an online format; only 6% believe that it is more difficult for lecturers to motivate themselves to work in the face-to-face format, while this figure is 22% in the online format.

Table 2.8.3. Comparison of the quality and effectiveness of learning formats (lecturers, %)

&	in a full-time (face-to-face) format	*approximately the same*	in an online format
It is more difficult to organise the work environment...	7,2	49,2	**43,6**
It is harder to motivate yourself to work...	5,7	**72,1**	**22,2**
Higher quality education is provided...	**61,8**	35,5	2,7
Lecturers are better at giving lectures...	**34,7**	**45,4**	19,8
Students are more likely to skip classes...	34,3	**46,8**	18,9
Students are more actively involved in classes...	**55,5**	38,3	6,2
Lecturers are better at conducting seminars (practical) and laboratory classes...	**58,4**	34,4	7,1

However, lecturers' assessments of the effectiveness of various forms of student work in online learning are not demonstrably negative. The share of lecturers who consider the work of students during online learning to be ineffective to varying degrees does not exceed 16% for almost all forms of work proposed for evaluation (see Table 2.8.4). The only exception was the **study of additional literature and sources: 30% of lecturers noted** that this form of work was performed **ineffectively** by students in online learning. However, the same number of lecturers share the opposite opinion, and 40% say that this form of work was effective in some respects and not in others; that is, there are no grounds for a negative conclusion.

Table 2.8.4. Assessment of students' performance (lecturers, %)

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Please estimate how effectively students perform during online learning…	**Absolutely INeffectively / Rather INeffectively**	*In some ways effectively, in others not*	**Very effectively / Rather effectively**
…in learning the lecture material	15,6	**49,4**	35
…in participating in seminars and practical classes	13,5	**42,8**	**43,7**
…in performing tasks, exercises, laboratory work	12,4	37,9	**49,7**
…in working with additional literature and sources	29,8	40	30,2
…in using the opportunity to contact the lecturer	11,3	29,2	**59,4**

The distribution of lecturers' opinions on the cost of distance education provides additional information about the assessment of distance education (see Table 2.8.5). **More than a half (51%) of lecturers believe that the cost of online and full-time education should be the same.** This is indirect evidence that lecturers do not see a fundamental, essential difference between these forms: at least the result of distance education is equal to the result of full-time education, otherwise it would be difficult to explain their "equivalence" in the perception of half of the lecturers.

Table 2.8.5. Cost of distance education (lecturers)

According to you, the cost of online higher education should be…	*%*
the same as of full-time education	51,4
lower than of full-time education, but higher than of part-time education	35,3
the same as of part-time education	13,2
Total	100

Nevertheless, **35% of lecturers believe that the cost of this form of education should still be lower than full-time**, but higher than part-time. It can be assumed that this is the percentage of lecturers who are inclined to allocate online higher education to an independent status.

As a general summary, lecturers were asked to characterise an distance education format by solidarising or denying the following assessment statements (see Table 2.8.6). Among the proposed statements there is a unifying one for the majority of respondents: **57% of lecturers believe that online learning requires a large amount of additional time** due to the need for in-depth adaptation of practical and laboratory work. The next most popular statement was agreed by only **44.1% of lecturers, who acknowledged the increased efficiency of**

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online learning due to the use of technical innovations. However, these 44% are also a significant figure. Moreover, the table shows that even **the least popular theses gained at least 25%**. So, we have to admit that **psychological discomfort** with distance education, **lack of teaching and learning materials**, **lower quality** of education due to the inability to use proven forms of teaching, as well as **restrictions and formalisation of communication are relevant for at least a quarter** of lecturers. It is interesting that such a seemingly "obvious" thesis as **facilitating the technical and procedural aspects of quality control of knowledge acquisition** in distance education **was ranked last**.

Table 2.8.6. Overall assessment of an distance education format (lecturers)

Which of the following statements correspond to your experience of teaching in online learning?	%
Online learning requires a large amount of additional time, as it requires in-depth adaptation of practical and laboratory work	**57,3**
Online learning increases efficiency by enabling the use of many technical innovations in teaching	44,1
Online learning requires a large amount of additional work to prepare methodological support of a purely formal nature	36,9
Online learning limits and over-formalises communication between students and lecturers and between lecturers and HEI heads	29,4
Online learning reduces the quality of education due to the impossibility or inappropriateness of using many proven forms of teaching	28,8
Online learning without classroom contact with students and colleagues makes me feel psychologically uncomfortable	27,4
For online learning, there is a severe lack of quality teaching and learning materials, so you have to develop them yourself	26,5
Online learning facilitates the technical and procedural aspects of quality control of knowledge acquisition and increases its reliability	**25,4**

In general, if we recall that along with the most popular statement about adaptation activities as a critical factor in the growth of lecturer employment in distance education, **a rather significant percentage (37%) was given to the thesis about large additional amounts of purely formal work** in distance education, we can conclude that there is a certain **negative asymmetry in the attitude of lecturers to distance education**, and **the negative is associated with an increase in** lecturer **workload**.

Summarising the data obtained, the following can be stated:

- distance education mostly causes **alienation and dissatisfaction** of a significant part or majority **of lecturers**;

- most often, **negative attitude** towards distance education **is associated with external formal factors**: higher workload of lecturers compared to traditional education, insufficient technical support of the educational process or time and resources to improve it, excessive external pressure of a formal nature, failure to take into account

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the peculiarities of lecturer's work in an online format in the administrative accounting of professional tasks performed, etc.;

- the main **essential claim** to distance education is **the lack of necessary "live" communication** with students; in addition, the opinion of a certain part of lecturers that an online format a priori narrows the range of possible (including reliable, proven) pedagogical means, despite the opening of additional technical possibilities, is noteworthy;

- however, **lecturers** demonstrate a relatively **low level of scepticism about student work** within an online format, do not see a fundamental difference between online and face-to-face formats in terms of the effectiveness of student learning.

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Section III. HEI Heads' Perceptions of Distance Education

3.1. General information about the sample of HEI heads

Sex	Female	Male
	49,5%	50,5%

Position	Rector, vice-rector	Dean of the faculty	Director of the educational and research institute	Head / chief of the department
	19,6%	26,2%	15%	39,3%

Work experience in an administrative position	up to 3 years	from 3 to 10 years	from 10 to 20 years	over 20 years
	19,6%	35,5%	24,3%	20,6%

Higher education institution	%
Kyiv National Economic University named after Vadym Hetman	25,2
Lviv National Environmental University	11,2
Chernihiv Polytechnic National University	13,1
Uman National University of Horticulture	11,2
V. N. Karazin Kharkiv National University	26,2
Petro Mohyla Black Sea National University	13,1

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3.2. HEI heads' attitude to distance education

HEI heads perceived the transition to an online format even more negatively than lecturers: for the majority (51%), it caused almost no emotions, but at the same time, 40% indicated that this transition upset/disappointed them; 8-9% expressed positive emotions.

Table 3.2.1. Reaction to the transition to an online format (HEI heads)

What emotions did the transition to online learning cause you?	%
I was **upset and disappointed** by this transition	40,2
It **caused** almost **no emotions**	51,4
The transition was **satisfying and joyful**	8,4
Total	100

Contrary to gender stereotypes, **it was men who expressed emotional assessment** of this transition more often (both positive and negative); most often, **the heads of V.N.Karazin KNU expressed disappointment**, and **UNUH expressed joy**. There is no connection between emotional reaction and position or work experience.

This reaction is partly explained by the specifics of the perception of online learning, which, compared to full-time/face-to-face learning, is a loser in terms of psychological comfort (59% of HEI heads consider face-to-face learning to be more psychologically comfortable), motivation (58% of HEI heads say that it is more difficult to motivate themselves to study in the online format) and in the general assessment of how much more pleasant it is to work (only 4% of HEI heads believe that it is more pleasant to work in the online format, while 68% choose face-to-face learning).

Table 3.2.2. Socio-psychological comparison of training forms (HEI heads, %)

...to which learning format does this statement best apply?	**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	Total
Psychologically more comfortable...	58,9	24,3	16,8	100
It is harder to motivate yourself to the educational process...	6,5	35,5	57,9	100
It is more pleasant to work...	68,2	28	3,7	100

It is noteworthy that such a perception of online learning is equally true for all HEI heads, regardless of their university, work experience or position.

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3.3. HEI heads' perceptions of distance education organisation

The restrained negative reaction of HEI heads to the transition to remote work, among other things, was caused by the awareness of potential problems and difficulties that this transition may cause. Thus, **the majority of HEI heads believe that it is more difficult to organise a working environment in an online format**: 56% believe so; another 38% see no difference in the complexity of organising the work environment; and only 6% believe that the face-to-face format is more difficult in this aspect.

Table 3.3.1. Comparison of learning modes in terms of work organisation (HEI heads, %)

&	**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	Total
It is more difficult to organise the working environment…	5,6	38,3	56,1	100

In addition to the average assessment of the complexity of the work environment, we propose to consider a number of specific indicators of the organisational challenges that the remote format potentially poses.

Firstly, it is the need and opportunity to **simplify the procedure for enrolling** students in an online learning programme (*see Table 3.3.2*).

Table 3.3.2. The problem of simplifying the enrolment procedure (HEI heads)

Is it possible to simplify the enrolment procedure for online learning programmes?	%
Yes, it is possible and necessary	22,4
Yes, it is possible, but not necessary	29,9
It is necessary, but hardly possible	8,4
It is neither possible nor necessary	**39,3**
Total	100

About **a third of the surveyed HEI heads** (31%) see **the need to simplify the** enrolment **procedure**; and about **half** (52%) **consider it possible**. Therefore, it can be stated that this issue is not urgent. It is also significant that the option "it is neither possible nor necessary" was most often chosen by rectors and vice-rectors, as well as deans of faculties; the opinions of

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directors of educational and research institutes and heads of departments were fundamentally different (*see Table 3.3.3*):

Table 3.3.3. The problem of simplifying the enrolment procedure (HEI heads by position, %)

Is it possible to simplify the enrolment procedure for online learning programmes?	**Rector, vice-rector**	**Dean of the faculty**	**Director of the educational and research institute**	**Head / chief of the department**
Yes, it is possible and necessary	14	7	**31**	**33**
Yes, it is possible, but not necessary	29	32	25	**31**
It is necessary, but hardly possible	14	4	13	7
It is neither possible nor necessary	**43**	**57**	**31**	29
Total	100	100	100	100

** each sub-sample has <100 respondents, so the percentage distribution is conditional*

However, in terms of responses among **different HEIs, the situation is ambiguous**: the heads of V. N. Karazin **KNU are** much **more likely** than others **to believe** that **this is possible and necessary**; the heads of **KNEU** named after Vadym Hetman, on the contrary, **are more likely to say** that **this is not possible** (*see Table 3.3.4*).

Table 3.3.4. The problem of simplifying the enrolment procedure (heads by HEI, frequency)

&	**KNEU named after Vadym Hetman**	**LNEU**	**CPNU**	**UNUH**	**V.N. Karazin KNU**	**Petro Mohyla BSNU**
Yes, it is possible and necessary	6	0	1	1	**13**	3
Yes, it is possible, but not necessary	**10**	4	2	4	**9**	3
It is necessary, but hardly possible	1	0	4	2	0	2
It is neither possible nor necessary	**10**	**8**	**7**	**5**	6	**6**
Total	27	12	14	12	28	14

Secondly, distance education raises the issue of the need for **specialised software systems** (learning management systems, LMS).

Table 3.3.5. Need for specialised software systems (HEI heads)

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Is there a need for specialised software systems (learning management systems, LMS) to implement distance education?	Definitely not / Most likely not	In some respects, and in others not	Rather, yes	Definitely yes	Total
	12,2	32,7	26,2	29	100

It is noteworthy that the assessments of the need are not related to the position of the administrator, work experience, or place of work (HEI); that is, all categories of HEI heads have approximately the same opinion.

Comparing HEI heads' assessments with those of academic staff, the situation is quite clear: since HEI heads have the opportunity to see this issue in a complex and are simply better informed on this topic, it is easier for them to express a certain opinion: 43% of academic staff were undecided, while among HEI heads there were 33%. In addition, among HEI heads, there are significantly more of those who see the need for this (55% of managers tend to see the need for this, while among academic staff there are only 25%). Conversely, only 12% of the surveyed HEI heads do not see the need for this (for academic staff, this share was 20%). Therefore, it can be stated that **there is a certain gap in the opinions of academic staff and HEI heads regarding the need for specialised software systems**: lecturers are apparently more likely to fear these innovations due to the fear of increased bureaucratic and extracurricular workload; they may also lack confidence in their own understanding of what is involved, so they do not have a formed position. HEI heads have a better understanding of this issue, but the fact that a third of respondents chose the undecided option indicates that they do not yet have enough understanding to make strategic decisions.

At the same time, when it comes to **choosing an online learning system** (or rather, the reasons for its choice), HEI heads tend to focus on the wishes of lecturers and students (*see Table 3.3.6*). Obviously, this is a complex issue that requires a multifactorial solution, but the respondents were deliberately offered a question with the possibility of choosing only one answer ("main reason"). And the **relative majority of HEI heads** (41%) indicated **the opinions and wishes of lecturers and students** as **the main reason for choosing** an online learning system. That is, according to HEI heads, lecturers should express their wishes in this regard, but, as the answers to the previous question show, most of the academic staff do not have a firm position on this issue (we did not even try to ask students about this). A similar distribution of selection criteria is observed in all HEIs. Therefore, the issue of reconciling the wishes of the academic staff and the vision of the administration is urgent for everyone and requires a specific solution at the local level.

Table 3.3.6. HEI heads about the choice of an online learning system

What should be the main reason for choosing an online learning system?	%
Opinions and wishes of lecturers and students	41,2

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Possibilities of using it as a single system for the entire HEI	31
Recommendations from partner universities with experience in distance education	11,3
Recommendations of specialised technical specialists	8,5
The most favourable tender result by price criterion	4,7
Other	3,3
Total	100

Third, the issue of **developing certified online learning courses and the possibility of funding them**. This question in this study receives a classic answer - there is a need, but no opportunity (66%). Another 22% of HEI heads see a need for this and note that such an opportunity exists. And only 12% of the surveyed HEI heads say that there is no such need.

Table 3.3.7. HEI heads about the development of certified online learning courses

Is there a need and opportunity to pay for the development of certified online learning courses, as well as the development of monographs, manuals, etc.?	%
There is a need and an opportunity	22,4
There is a need, but no opportunity	**66,4**
There is no need, but there is an opportunity	3,7
There is neither a need nor an opportunity	7,5
Total	100

There is a significant difference in the responses to this question from the HEI heads of different HEIs: all the heads of Chernihiv Polytechnic NU and almost all the heads of V. N. Karazin KNU see the need to fund the development of certified online learning courses, but they assess the possibility differently (the responses of the representatives of Chernihiv HEI on the possibility/impossibility of funding were divided almost in half, while the representatives of Kharkiv HEI most often indicated that there is a need, but no such possibility). Representatives of the Petro Mohyla BSNU and UNUH answered in a similar way, although the number of heads who do not see the need for this is relatively higher there. At LNEU the situation is different: one third of the surveyed HEI heads do not see the need for this, but of those who do, almost all indicate that there is no possibility. And at KNEU named after Vadym Hetman, the share of those who see a need and indicate an opportunity is one of the highest.

Table 3.3.8. Development of certified online learning courses (heads by HEI, frequency)

&	**KNEU named after Vadym Hetman**	**LNEU**	**CPNU**	**UNUH**	**V.N. Karazin KNU**	**Petro Mohyla BSNU**
There is a need and an opportunity	**7**	1	**6**	2	4	4
There is a need, but no	**17**	**7**	**8**	**8**	**23**	**8**

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opportunity						
There is no need, but there is an opportunity	1	**2**	0	0	1	0
There is neither a need nor an opportunity	2	**2**	0	2	0	2
Total	27	12	14	12	28	14

Fourth, the issue of **technical and resource support for distance education** - servers, software, etc. Here, the situation is similar to the one described in the previous paragraph, even more pronounced: 95% of respondents acknowledge the need, but only 22-23% indicate the ability to provide it.

Table 3.3.9. Need and possibility of purchasing technical equipment (HEI heads)

Is there a need and opportunity for additional financial expenditures for the purchase of servers, software, video laboratories and other technical equipment for an online format?	%
There is a need and an opportunity	20,6
There is a need, but no opportunity	**74,8**
There is no need, but there is an opportunity	1,9
There is neither a need nor an opportunity	2,8
Total	100

The situation is similar in all higher education institutions, and the answer does not depend on either position or work experience. Here we can only state that there is **almost universal awareness of the need and a general recognition of the impossibility of meeting it**.

Fifth, it is the question of **the need to create a separate organisational structure** for online learning. The question itself was formulated in an abstract way (since this topic is not easily quantifiable and should be studied using qualitative and narrative research methods), which is why the results are rather vague. A quarter of HEI heads chose the "medium" option, and another quarter each chose the "easy" options - "rather, yes" and "rather, no". 18% said there was no such need, while only 9% definitely agreed with the need.

Table 3.3.10. Need for a separate organisational structure (HEI heads)

Does online learning require a separate organisational structure?	%
Definitely not	17,8
Rather, no	23,4
In some ways no, in others yes	23,4

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Rather, yes	26,2
Definitely yes	9,3
Total	100

Specifics are added by analysing the responses by individual HEIs:

- heads of CPNU, LNEU and UNUH more often answer that there is no need for this;
- heads of KNEU and BSNU, on the contrary, more often indicate that there is a need for this;
- responses of KNU heads coincide with the average indicators (shown *in Table 3.3.10*).

A number of specific questions about the need to create separate structural units with specific functions in the context of distance education give somewhat different results. Since this is an internal issue that concerns each HEI separately, we present the data immediately in terms of educational institutions: we consider the results in the form of a need index, where 1 means there is no need, and 10 means it is necessary (*Table 3.3.11*).

Table 3.3.11. Need to create structural units (HEI heads)

Is there a need to create separate structural units for…	**KNEU named after Vadym Hetman**	**LNEU**	**CPNU**	**UNUH**	**V.N. Karazin KNU**	**Petro Mohyla BSNU**
supporting and maintaining an online learning system?	5,1	4,3	3,6	3,8	3,9	5,4
technical and resource support of online learning?	4,6	4,3	4,3	4,0	4,2	4,1
online learning **management?**	4,8	3,5	4,7	3,5	3,5	4,1
methodological support of online learning?	4,6	3,0	3,6	4,0	3,8	3,4
ensuring **information security** for online learning?	5,6	3,8	4,5	4,8	4,0	4,3

(index of the need for creation; min=1, max=10)

As a rule, **the heads** of all HEIs **did not demonstrate interest in establishing such units**. The exceptions are KNEU named after Vadym Hetman, where the need to create units for support and maintenance of online learning and information security for online learning was expressed to some extent; and Petro Mohyla BSNU has some interest in online learning system support and maintenance department. However, we emphasise that all these assessments are conditional, as in none of the cases did the average assessment of the need exceed 6 out of 10.

Sixth, there is the issue of **asynchronous learning** and its correlation with synchronous learning. This question was asked of both HEI heads and academic staff; moreover, almost

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identical answers were received from different stakeholders; therefore, we propose to consider the responses of HEI heads and academic staff in combination.

Thus, 63-65% of the surveyed HEI heads and academic staff speak in favour of synchronous components of online learning over asynchronous ones (*see Table 3.3.12*).

Table 3.3.12. Ratio of synchronous and asynchronous components (academic staff and HEI heads, %)

In your opinion, what should be the ratio of synchronous and asynchronous interactions in online learning?	**Academic staff**	**HEI heads**
Synchronous components should be the main ones, while asynchronous components can only complement and detail them	35,1	31,8
Synchronous components should predominate, but asynchronous components are also appropriate	30,4	31,8
The ratio of synchronous and asynchronous components **is not fundamental** to the effectiveness of online learning and can be any	27,3	28
Asynchronous components should predominate over synchronous components, although the latter are important	5,5	7,5
Asynchronous components should form the basis of distance education, synchronous components should be used as an exception	1,7	0,9
Total	100	100

At the same time, the total share of supporters of asynchronous components is 7-9% in each of the samples; this indicator is not convincing on its own, but together with 27-28% of those who do not consider the ratio of synchronous and asynchronous components to be fundamental, the overall picture of the opinion of HEI heads and lecturers on this issue does not look so unambiguous. This view of the ratio of synchronous and asynchronous modes of learning is typical for all categories of HEI heads and academic staff, regardless of the HEI, position, work experience, etc.; that is, the variability of attitudes is determined rather by personal preferences and personal experience.

3.4. HEI heads' perceptions of workload during distance education

Comparing the responses of different groups of stakeholders to the question of comparing face-to-face and online formats in terms of which one causes more fatigue, it is clear that for HEI heads, online learning is more difficult.

Table 3.4.1. Comparison of different formats in terms of fatigue (%)

Causes more fatigue...	**a full-time (face-to-face) format**	*approximately the same*	**an online format**	Total

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responses of students	**59,4**	26,8	13,7	100
responses of academic staff	19,5	**43,2**	37,4	100
responses of HEI heads	12,1	37,4	**50,5**	100

Students tend to say that the face-to-face format causes more fatigue. Lecturers most often evaluated the two formats equally in terms of fatigue, but those who chose online as more tiring were almost twice as numerous as those who chose face-to-face. HEI heads continue and reinforce the trend observed among academic staff: **half of the surveyed HEI heads believe that it is online format that causes more fatigue**, and another 37% say "approximately the same". This situation is also observed in the analysis of HEI heads' assessments of how the workload of students and lecturers has changed.

Table 3.4.2. Assessment of changes in the workload of students in different forms of education by different groups (%)

In your opinion, has the workload changed in terms of online learning compared to face-to-face learning?	**Students about students**	**Lecturers about students**	**HEI heads about students**
Yes, it has increased significantly	15,3	13,7	12,1
Yes, it has increased slightly	**27,7**	26,8	**36,4**
No, it hasn't changed	**30,8**	**36,3**	28
Yes, it has decreased slightly	20,6	18,2	19,6
Yes, it has decreased significantly	5,6	5	3,7
Total	100	100	100

It is interesting that HEI heads are more sensitive than representatives of these groups in assessing changes in students' workload and in assessing changes in lecturers' workload. When assessing the workload of students, HEI heads are much more likely than academic staff and even more likely than students themselves to note that their workload has increased. The same is true when assessing the situation of lecturers: while students somewhat underestimate the increase in the workload of academic staff (based on the responses of academic staff themselves), HEI heads even overestimate it - they are 8% more likely to say that the workload of academic staff has increased significantly than the academic staff themselves.

A closer look at the data contained in *Table 3.4.3* leads to the following conclusions:

- from the point of view of **lecturers**, the majority (46.5%) believes that the workload **has increased significantly** in online learning;
- from the point of view of **students**, 35% say that the workload of lecturers **has slightly increased**;
- among **HEI heads**, the largest share (54%) believes that the workload of lecturers **has increased significantly** in online learning.

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At the same time, there is a certain number of responses that indicate an unchanged or reduced workload of lecturers.

In general, with the increasing use of online learning, many lecturers are experiencing an increased workload. The opinions of students and HEI heads confirm that many lecturers are investing more effort and time in online learning. It is necessary to take these changes in lecturers' workload into account when planning and organising online learning, providing adequate support, resources and learning materials for lecturers.

Table 3.4.3. Assessment of changes in the workload of academic staff in different forms of education (%)

In your opinion, has the workload changed in terms of online learning compared to face-to-face learning?	**Lecturers about lecturers**	**Students about lecturers**	**HEI heads about lecturers**
Yes, it has increased significantly	**46,5**	16,5	**54,2**
Yes, it has increased slightly	31,9	**35,2**	31,8
No, it hasn't changed	17,1	28,8	10,3
Yes, it has decreased slightly	3,6	15,2	1,9
Yes, it has decreased significantly	0,9	4,3	1,9
Total	100	100	100

3.5. HEI heads' perceptions of the organisation of control and monitoring during distance education

An online format can bring new challenges in the context of **organising control and monitoring of work**. However, based on the responses of HEI heads, **this issue is not urgent**: **50-75% of HEI heads were unable to estimate** the appropriateness or inappropriateness of various methods and technologies for additional accounting of lectures in online format.

Considering only substantive responses (i.e. those where HEI heads and academic staff were able to give some assessment of different control methods), there is a certain **discrepancy between the views of HEI heads and academic staff** (*see Table 3.5.1*). Regarding the possibility of **joining representatives of the administration / dean's office in online classes** for control, **lecturers** are more **negative** (39% of lecturers consider it unacceptable, and 28% agree), while **HEI heads perceive** this method of control **better** (18% consider it unacceptable, but 30% consider it appropriate). Another control method - conducting classes exclusively on platforms with video recording of the presence and activity of the lecturer - did not receive a valid assessment, and the differences between the responses of academic staff and HEI heads are rather random. And the third control method among the proposed ones - **monitoring of student evaluation** of lecturers - **is perceived as appropriate by the**

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academic staff themselves, while **HEI heads have the most doubts** (meaningless answers).

Table 3.5.1. Assessment of additional monitoring methods (lecturers and HEI heads, %)

Please evaluate the following methods and technologies for additional monitoring of lectures and consultations in an online mode		I consider it unacceptable	I consider it acceptable	*I can't evaluate*	Total
Joining a representative of the administration/dean's office to an online class	Responses of academic staff	**38,7**	28,2	33,2	100
	Responses of HEI heads	17,8	29,9	**52,3**	100
Conducting classes exclusively on platforms with video recording of the presence and activity of the lecturer	Responses of academic staff	**35,4**	**36,4**	28,2	100
	Responses of HEI heads	16,8	21,5	**61,7**	100
Monitoring student assessment of lecturer's performance	Responses of academic staff	19,6	**56,4**	24	100
	Responses of HEI heads	12,1	13,1	**74,8**	100

The next question in this block concerned the impact of the transition to an online format on **academic integrity** (*see Table 3.5.2*). Here, the opinions of HEI heads largely coincide with those of academic staff, but there are also nuances: half of the surveyed HEI heads (51%) believe that distance education makes it difficult to verify compliance with academic integrity standards, while among academic staff, the number of such people is 41%; those who do not see the transition as affecting academic integrity are 42% among HEI heads and 50% among academic staff. That is, **HEI heads are a little more concerned about this than lecturers, but in general their positions are similar**.

Table 3.5.2. Assessment of the impact of distance education on academic integrity (%)

Does the transition to online learning affect the situation with academic integrity?	**Academic staff**	**HEI heads**
Yes, it **makes** it **easier** to monitor compliance with academic integrity standards	9,3	6,5
Yes, it **makes** it **difficult** to verify compliance with academic integrity standards	**41,1**	**51,4**
No, this transition **does not have** a fundamental **impact** on academic integrity	49,6	42,1
Total	100	100

Therefore, it is significant that in the assessment of the need for **special regulation of lecturers' copyrights, there is a complete coincidence of views between HEI heads and academic staff** (*see Table 3.5.3*). 30% of HEI heads and academic staff believe that no

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new regulatory procedures are needed, the existing ones are sufficient; 45% of both groups see the need to refine such procedures; and 25% indicate that there is a need to develop new, separate procedures for regulating intellectual property rights. This distribution of opinions is not very informative, if only because the answer to this question does not correlate with the position, work experience, or HEI. Therefore, additional research, primarily using qualitative methods, is needed to answer this question.

Table 3.5.3. Attitudes towards special regulation of copyright for lecturers (%)

Do the intellectual property rights of lecturers who create learning content for distance education require special regulation?	**Academic staff**	**HEI heads**
No, there are sufficient procedures for regulating intellectual property rights for both full-time (face-to-face) and part-time education	30,3	29,9
Yes, it is necessary **to refine the procedures** for regulating intellectual property rights, taking into account the peculiarities of online form	44,7	44,9
Yes, **separate procedures** for regulating intellectual property for distance education are needed	25	25,2
Total	100	100

3.6. HEI heads' assessments of the effectiveness of distance education

In analysing the HEI heads' perceptions of the effectiveness of distance education, we will start with an illustrative comparison of the comparative and generalising question asked to all stakeholder groups: which format provides better quality education?

Table 3.6.1. Comparative assessment of the quality of education in different forms of learning (%)

Better quality education is provided... (for students: It is possible to get a better education...)	**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	Total
responses of students	**49,9**	40,4	9,6	100
responses of academic staff	**61,8**	35,5	2,7	100
responses of HEI heads	**75,7**	23,4	0,9	100

The general trend applies to all three groups, but HEI heads are more radical here (*see Table 3.6.1*) - three quarters of the surveyed HEI heads "vote" for the face-to-face format, while the academic staff and students were noticeably more moderate (62% and 50% respectively).

Assessments of **the student dimension of education quality**: students were more likely to believe that they are forced to skip classes in the face-to-face format (43%), but HEI heads were

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again more radical - 56% chose this answer (*see Table 3.6.2*). The general trend was broken by lecturers, 47% of whom believe that students skip classes equally often in both formats; we can consider this position to be more sceptical about the general qualities of students. The opinion on which format is more convenient for students to combine study and work united all three groups of stakeholders (all believe that it is more convenient to do so in an online format), but students are more radical (83% vs. 74%-77% in the other groups). The same is true for student participation in classes: all stakeholders consider it higher than in the face-to-face format, but HEI heads are more radically optimistic about it - 67% vs. 56% among lecturers and 43% among students.

Table 3.6.2. Comparison of different forms of education by student aspects (%)

...to which learning format this statement is best suited?		**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	Total
Students are more likely to skip classes...	Responses of students	**43**	36,2	20,9	100
	Responses of academic staff	34,3	**46,8**	18,9	100
	Responses of HEI heads	**56,1**	34,6	9,3	100
Students find it easier to combine study and work...	Responses of students	4,5	12,8	**82,7**	100
	Responses of academic staff	6	20	**74**	100
	Responses of HEI heads	4,7	18,7	**76,6**	100
Students are more actively involved in classes...	Responses of students	**42,6**	39,4	17,9	100
	Responses of academic staff	**55,5**	38,3	6,2	100
	Responses of HEI heads	**67,3**	27,1	5,6	100

Comparison of **the quality of lecturers' work** in different learning formats shows a more even distribution across stakeholder groups (*see Table 3.6.3*). Nevertheless, HEI heads were significantly more likely to prefer the face-to-face format when it came to the quality of seminars (73% vs. 58% of lecturers), and students were more likely to see no difference between the formats in this regard (42%). The rather high percentage of students who preferred the online format in this regard is also noteworthy - 18% compared to 7% of lecturers and 3% of HEI heads. Regarding the quality of lectures, the prevailing opinion in all groups is that the quality of lectures is approximately the same in both formats, but lecturers are still slightly more likely to prefer the face-to-face format in this regard.

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Table 3.6.3. Comparison of different forms of education by teaching aspects (%)

…to which learning format this statement is best suited?		**in a full-time (face-to-face) format**	*approximately the same*	**in an online format**	*Total*
Lecturers are better at giving lectures…	Responses of students	32,8	44,1	23,1	100
	Responses of academic staff	**34,7**	45,4	19,8	100
	Responses of HEI heads	33,6	**45,8**	20,6	100
Lecturers are better at conducting seminars (practical) and laboratory classes…	Responses of students	39,9	**42**	18,2	100
	Responses of academic staff	**58,4**	34,4	7,1	100
	Responses of HEI heads	**72,9**	24,3	2,8	100

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Section IV. Employers' Perceptions of Distance Education

4.1. General information about the sample of employers

Sex	Female	Male
	49,2%	50,8%

Education	Higher (specialist, Master's degree)	Two or more higher education degrees / Scientific degree	Higher (Bachelor's)	Secondary / secondary specialised
	57,9 %	37,6%	2,9%	1,7%

Work experience in a leading position	up to 3 years	from 3 to 10 years	from 10 to 20 years	over 20 years	None
	13,2%	13,2%	27,3%	14%	11,6%

Entrepreneurial experience	up to 3 years	from 3 to 10 years	from 10 to 20 years	over 20 years	None
	9,1%	35,5%	14%	9,5%	40,9%

Ownership type of the enterprise/institution	Private	State	Joint
	68,5%	28,5%	3%

Size of the enterprise/institution represented by the respondent	**%**
Small enterprise (up to 20 employees)	35,1
Medium-sized enterprise (from 21 to 100 employees)	31
Ultra-large enterprise (over 500 employees)	18,6
Large enterprise (from 101 to 500 employees)	15,3

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What type of economic activity is your organisation engaged in?		*%*
A	Agriculture, forestry and fisheries	24,8
C	Finance and insurance activities	13,6
D	Provision of other types of services	11,2
E	Wholesale and retail trade; repair of motor vehicles and motorcycles	8,3
F	Information and telecommunications	8,3
G	Education	7,9
H	Processing industry	5,4
I	Professional, scientific and technical activities	4,5
J	Construction	3,3
K	Public administration and defence; compulsory social insurance	2,9
M	Healthcare and social assistance services	2,9
N	Temporary accommodation and catering services	1,7
O	Administrative and support services activities	1,7
P	Transport, warehousing, postal and courier services	1,2
Q	Supply of electricity, gas, steam and air conditioning	0,8
R	Water supply; sewerage, recycling and waste management	0,8
S	Arts, sports, entertainment and recreation	0,8
Total		100

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List of enterprises, institutions, organizations, whose representatives took part in the survey

1. Postup Farming Enterprise
2. Zelenkivske Private Agricultural Enterprise
3. TETIANA Farming Enterprise
4. Goryn Agro LLC
5. Yuliia Family Farming Enterprise
6. Froter S.V. IE
7. Gloria Private Agricultural Enterprise
8. Urozhay Agri Myronivskyi PJSC
9. Zoria Podillia
10. Agroexpert International LLC
11. Lebedynskyi Seed Plant LSP
12. Khliborob Family Farming Enterprise
13. Krymiane Farming Enterprise
14. Poliana Lisova Farming Enterprise
15. Cherkasy Soya PE, processing plant
16. Lysakove Farming Enterprise
17. Agrochimtechnology LLC
18. Adama Ukraine LLC
19. Astarta vertically integrated agricultural holding company
20. Summit Agro Ukraine LLC
21. Bak LLC
22. Agrolys agricultural online store
23. Concret-Group LLC
24. Zoria Podillia Food Company LLC
25. Agro Expert International LLC
26. LEBEDYNSKYI SEED PLANT PJSC
27. Poihaly z namy Travel Agency
28. Kozatska Dolyna Khutir Tourist and entertainment complex
29. Zosym Farming Enterprise
30. Uman Dental Clinic MNE
31. Vizavi Publishing and Printing Centre
32. Krasnyi Stav Restaurant
33. Compas Travel Agency
34. Agrotech LLC
35. Department of Viticulture and External Relations
36. Ministry of Agrarian Policy and Food of Ukraine
37. Khmelnytsk Mlyn LLC
38. LEBEDYNSKYI SEED PLANT (LSP) PJSC

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39. Umansky Elevator Branch of State Food and Grain Corporation of Ukraine Joint Stock Company
40. FRENDT LLC, Executive Director
41. Agrovest Ukraine PE
42. Agrospeace Trading Company LLC
43. Grace Uman Farming Enterprise
44. RDO "Ukraine" Uman Regional Directorate
45. Uman Greenhouse Plant Private rental agricultural enterprise
46. Hadz Farming Enterprise
47. Harna sprava Farming Enterprise
48. Fortetsia hotel and entertainment complex
49. Yaroslav Farming Enterprise
50. EnergoService Farming Enterprise
51. Skarby Podillia Farming Enterprise
52. Department of Labour and Social Security of the Uman District State Administration
53. RIA Media Corporation (ria.com)
54. K-Service Service Centre
55. Technolog PJSC
56. automoto.ua online store
57. NUNEMS Ukraine LLC, Department of breeding and research
58. Limagrain Ukraine LLC
59. Central Forest Office of the Forests of Ukraine State Specialised Economic Enterprise
60. Zolotonosha Forestry Branch of the Forests of Ukraine State Specialised Economic Enterprise
61. Stepivske Farming Enterprise
62. Bohdanivskyi Plant Nursery LLC
63. Dary Berehivshchyny Agricultural Service Cooperative
64. Yednist Farming Enterprise
65. Tserera-Agro-Trans PE
66. Khliborob Agrofirm LLC
67. Proline Trade LLC
68. Zvenyhorod Forestry Branch of the Forests of Ukraine State Specialised Economic Enterprise
69. Chyhyryn Forestry Branch of the Forests of Ukraine State Specialised Economic Enterprise
70. Sokyriany Forestry Branch of the Forests of Ukraine State Specialised Economic Enterprise
71. Summit-Agro Ukraine LLC
72. Svitlyi Lan Farming Enterprise
73. Volodymyrivske LLC
74. Sofiivka National Dendrological Park
75. Podillia-Agrokhimservis PE
76. Agrochemical Laboratory of Podillia-Agrokhimservis PE
77. Technocap UA LLC
78. Plantpol-Ukraine LLC

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79. Dobrotvir village council, Chervonohrad district, Lviv region
80. Davydivka village council, Lviv district, Lviv region
81. Krasne village council, Zolochiv district, Lviv region
82. Agrotem Farming Enterprise
83. Salix Energy LLC
84. Accounting House Company
85. Financial Department of Busk City Council
86. Astoria Hotel
87. Western Office of the State Audit Service
88. Western Ukrainian Specialised Children's Medical Centre
89. Prince Lev Municipal Clinical Hospital No. 1 Municipal non-profit enterprise
90. Hero of Ukraine Anatoliy Zhalovaha Dubliany Lyceum of the Lviv City Council
91. Lviv City Council, Department of Urban Development
92. Head Office of the State Service of Ukraine for Food Safety and Consumer Protection in Volyn Region
93. Alfa-Bank JSC
94. Krasnebruk LLC
95. Mudragelyk Child Development Centre, Busk, Lviv region
96. Busk radio, Busk, Lviv region
97. KOSTANTA LTD
98. AGRIANALITYKA LLC
99. Lviv City Employment Centre
100. Ivanychi Multipurpose Hospital Municipal Non-Profit Enterprise
101. Department of the State Treasury Service of Ukraine in Ivanychi district of Volyn region
102. Turianske secondary school, Zolochiv district, Lviv region
103. Enei Company LLC
104. Lvivholod Trading and Production Company
105. Head Office of the Pension Fund of Ukraine in Zakarpattia region
106. INTELLIAS CONSULTING LLC
107. Caritas-Brody Charity organisation
108. Premium Finance LLC
109. Zhovtanets secondary school, Chervonohrad district, Lviv region
110. IT companies: Chernihiv IT cluster, Evo, Valtech, SendPulse, Jevera
111. LOREAL UKRAINE LLC
112. Chernihiv Regional Chamber of Commerce and Industry
113. Chernihivnasinnia PJSC
114. KIVISMARTUA LLC is the official importer of household appliances and electronics of TM KIVI
115. STAFFSERVICE LLC is a recruitment and consulting company for labour and personnel issues
116. Head Office of the National Social Service in Chernihiv Region
117. Department of Labour and Social Security
118. CheZaRa PJSC - instrumentation

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119. SILPO-FOOD LLC
120. VIAT Trading House LLC - wholesale and retail trade in energy-saving equipment and machinery
121. VIAT Chernihiv Energy Saving Company LLC - production of heating systems and energy audit
122. Ukrbudservis LLC
123. Collar Company - production of pet products
124. Ukrainian Interbank Currency Exchange
125. Association of Ukrainian Banks
126. Association of fin-tech and innovative companies
127. Association of Investment Business
128. NBU Financial Companies Supervision Department
129. Pro Capital Investment Company
130. European Industrial Bank JSCB
131. Industrialbank JSCB
132. Oschadbank JSCB
133. Privatbank JSCB
134. Globus JSCB
135. FC Agrotekhnologii
136. Insurance Business Association
137. PROFIN CONSULTING LLC
138. Financial Consulting Centre LLC
139. MONOLITBUD PE
140. SoftServe IT company
141. U.Commodities Company
142. Danshen Group Agricultural Company
143. ORANTA IC
144. Khmelnytskinfocentr Khmelnytskyi City Utility Company
145. Strategic Development Agency (Bila Tserkva)
146. BADVASY LLC
147. GAIANE PE (garment factory)
148. NASU Institute for Economics and Forecasting
149. PUBLIC ORGANISATION BLACK SEA REGION DEVELOPMENT AGENCY
150. PrivatBank JSC CB
151. Oschadbank JSCB
152. UKRSIBBANK JSCB
153. UKRGASBANK JSCB
154. MTB BANK PJSC
155. Haisyn Music School
156. Head Office of the State Tax Service in Mykolaiv region
157. UNIT. City innovation park
158. Mykolaiv Regional Organisation of the Ukrainian Red Cross Society

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159. Mykolaiv Regional Centre for Retraining and Professional Development of Employees of State Authorities, Local Governments, State Enterprises, Institutions and Organisations
160. Regional centre for professional development in Kyiv region
161. ARTHIS Limited Liability Company (Activities in the field of engineering, geology and geodesy, provision of technical consulting services in these areas)
162. Nexteum IT company
163. PARM INVEST LLC
164. LIME KEPITEL LLC
165. Ukrainian Association of Financial Companies
166. DATAGROUP PJSC (Activities in the field of telecommunications)
167. Business Support Centre LLC
168. Philip Morris Ukraine PJSC (tobacco company)
169. UKRAINIAN ENERGY EXCHANGE LLC
170. RInnoHub innovation cluster, Regional Innovation HUB
171. PRNEWS LLC
172. Agrofusion, a Ukrainian vertically integrated group of companies
173. Kniazha Vienna Insurance Group PJSC UIC
174. Ministry of Veterans Affairs of Ukraine
175. MYKOLAIVSKYI KHLIBZAVOD #1 LLC
176. Nibulon AE LLC
177. VELOUR Mykolaiv Furniture Atelier
178. Farmak JSC
179. TAS Insurance Company PJSC
180. MRIYDIY PO
181. Goodstaff recruitment and development agency
182. Ukrainian National Bar Association
183. VENETO GROUP LLC
184. Department of Youth Policy of Mykolaiv City Council
185. FREEDOM FINANCE UKRAINE LLC
186. SILPO-FOOD LLC
187. Department of the State Treasury Service of Ukraine in Mykolaiv district of Mykolaiv region
188. ADS GROUP UKRAINE LLC
189. DataArt International company
190. FluidWeb company
191. GlobalLogic company
192. PepsiCo company
193. Nika Trans Logistics LLC
194. GeeksForLess company
195. Ciklum International company
196. Profit Whales companies
197. NOVIK LLC
198. Modul PJSC

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199. Abetka Publishing House
200. Nyva PJSC
201. Astral Web Agency LTD company
202. Shevchenkivska ATC, Mykolaiv region.
203. Dzherelce Preschool institution (Mykhailo-Larynka Dzherelce Preschool institution of Voskresensk village council, Mykolaiv region)
204. NIKPOZHEZHTECHSERVICE LLC
205. Impex Trade Ltd.

4.2. Employers and the experience of distance education

More than forty per cent of employers have never taken an online learning course (*see Figure 4A*). Almost the same number had taken online training only for some courses. However, a total of **17% of employers had at least one year of experience in full-fledged online learning**.

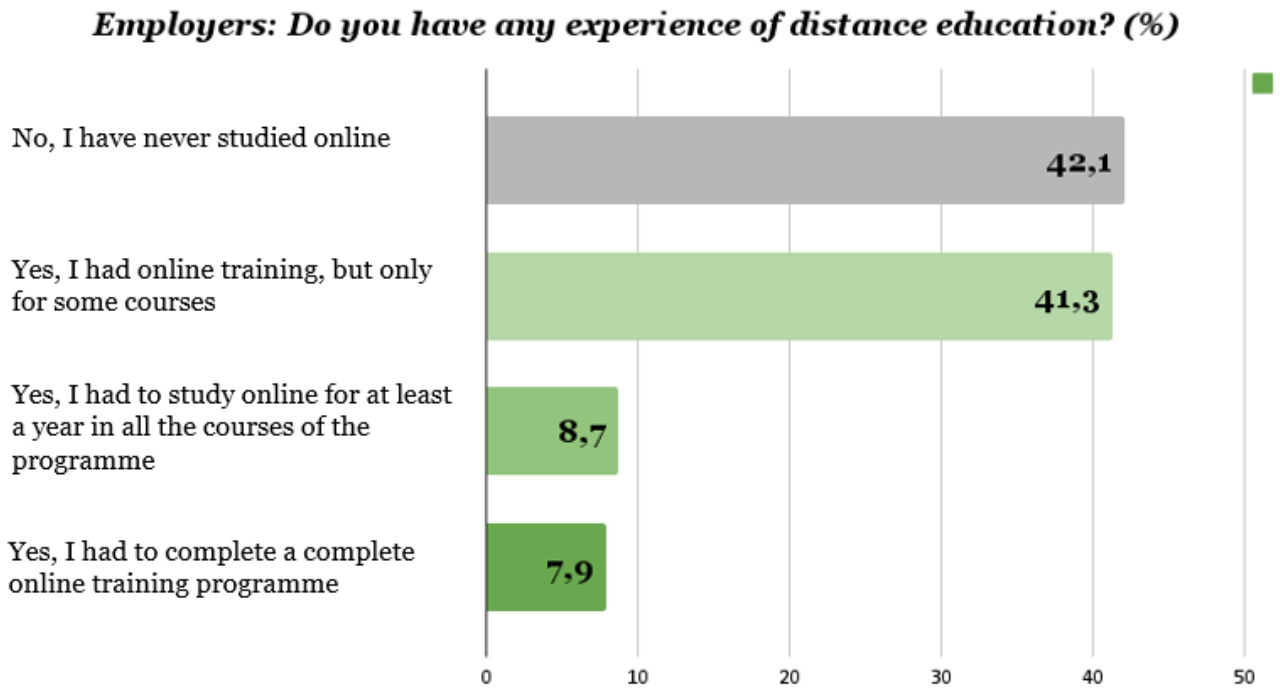

Fig. 4A

At the same time, 72% of employers indicated that their family members had some experience of online learning (*see Table 4.2.1*): **53% have children who have studied or are studying online at a secondary or secondary specialised educational institution**; children of 23% of employers have studied or are studying online at a higher education institution. Other family members had experience of online learning in 22-24% of employers.

Table 4.2.1. Experience of online learning in the family (employers)

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Has anyone in your family studied online?	%
Yes, your child/children have studied or are studying online at a school, college or professional school	**52,6**
Yes, other members of your family have studied or are studying online at a higher education institution	24
Yes, your child/children have studied or are studying online at a higher education institution	23,4
Yes, other members of your family have studied or are studying online at a school, college or professional school	22,3
No	**28,1**

**respondents could choose several options, so total is >100%*

In addition, 45% of employers indicated that either a few or a large number of their employees have experience of online learning (*see Table 4.2.2*). However, it is worth noting that the other 55% may simply not have such information, and thus the actual number of employees and subordinates with distance education experience may be higher.

Table 4.2.2. Experience of online learning among employees and subordinates (employers)

Do you have any employees or subordinates who are studying or have studied online?	*%*
No, I don't / Not sure	**55**
Yes, there are one or more of such employees / subordinates	37,1
Yes, there are quite a lot of such employees / subordinates	7,9
Total	100

As Table *4.2.3* shows, only one third of the enterprises represented by employers do not have the opportunity to work online. At the same time, **19% of employers said that almost all of their employees can work remotely**, and another 12% said that remote work is available to about half of their employees.

Table 4.2.3. Format of work at the enterprise or institution (employers)

Format of work at the enterprise / institution	*%*
Approximately half can work remotely, and half can work at the workplace	12,4
Most employees can work remotely, but some need to be at the workplace	16,5
Most employees must work at the workplace, but some may work remotely	18,6
Almost all employees can work remotely	19
Almost all employees have to work at the workplace	33,5
Total	100

In addition to the use of remote working, a significant number (44%) of enterprises represented by the surveyed employers engage in corporate online learning, with **19% of enterprises**

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having their own online learning programmes (*Figure 4B*). Among the 13% who did not answer, it is likely that some simply do not have the relevant information; therefore, it can be assumed that the actual share of enterprises with their own e-learning programmes may be even higher.

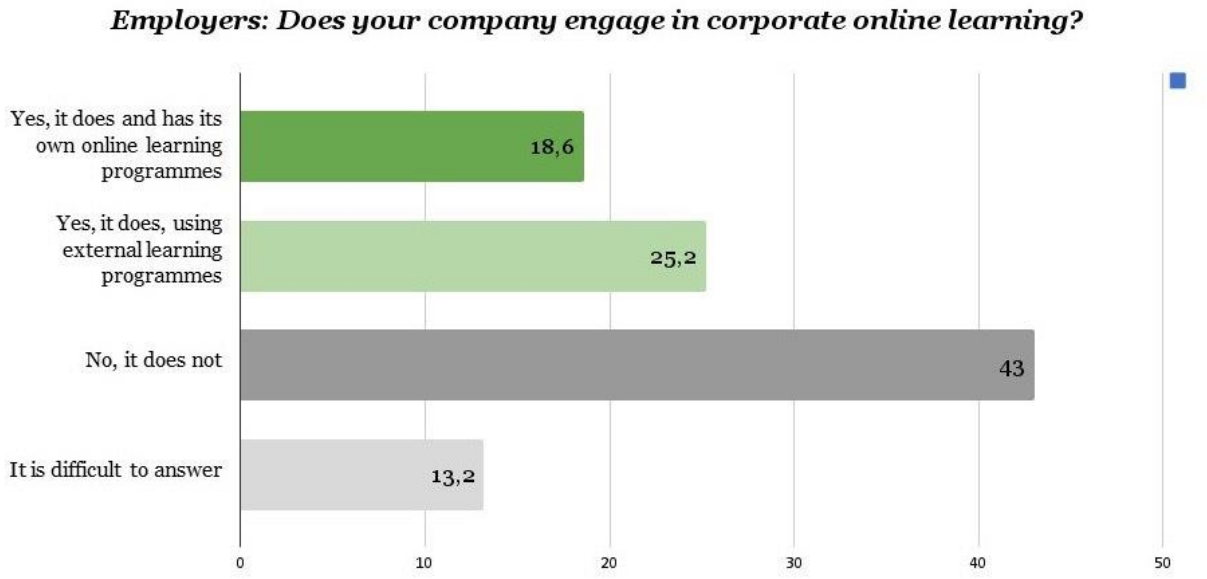

Fig. 4B

4.3. Employers' attitude and participation in distance education

An analysis of the opinions of modern employers on the qualification level of those who have obtained distance education has shown that **the advantages of distance education outweigh the disadvantages**, and, moreover, allow employees to acquire some positive and necessary qualities. To find out the attitude of employers to specialists who have obtained distance education, the respondents were asked the following question: "Imagine that you have to choose between two candidates for a position in your organisation: one of them has a diploma obtained through traditional education, and the other one - through distance education. How will this affect your decision?". The distribution of answers shows that **the majority of employers do not see any problems with a position being held by a person who has obtained a degree online**. At the same time, almost 20% emphasise that they will be more careful in assessing competences, and only 10% of respondents say that they will give preference to candidates who have studied in a traditional form of education (*see Table 4.3.1*). **Employers are interested** not so much in the way of education, but **in the ability to apply the skills**

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developed during the course of study. The integration of learning and information technologies makes it possible to develop a unified system of distance education in Ukraine based on self-training of future specialists. This is evidenced by the answers to the question about the integration of online learning elements within the institution/organisation: more than a third of respondents stated that they had the opportunity to join individual courses and used this opportunity.

Table 4.3.1. Distance education and recruitment decisions (employers)

Imagine that you have to choose between two candidates for a position in your organisation: one of them has a diploma obtained through a traditional form of education, and the other - through distance education. How will this affect your decision?	*%*
I **will not attach importance to this fact** and will make my decision based on other characteristics of the candidates	69,4
This fact will not affect the final decision, but **I will check the professional qualities of a candidate** with an distance education more closely	19,8
All other things being equal, I **will give preference to a candidate** who has studied in a **traditional form of education**	9,9
All other things being equal, I **will give preference to a candidate** who has studied in an **online form of education**	0,8
Total	100

Those interested in graduates of technical and mathematical specialities are 11-14% less likely to pay attention to the fact of distance education than others. In addition, private firms are 9-13% less likely to pay attention to this than state-owned firms.

Based on the data presented in *Fig. 4C*, more than half **(53%) of respondents believe** that there is **no difference** between those who studied in an online and traditional format. At the same time, **45% say** that **the new educational format leads to lower professional competence**. Thus, the opinions were divided almost equally, with a slight bias towards equal perception of the potential of distance education; and only **2% said** that the **online format could lead to higher** professional competence.

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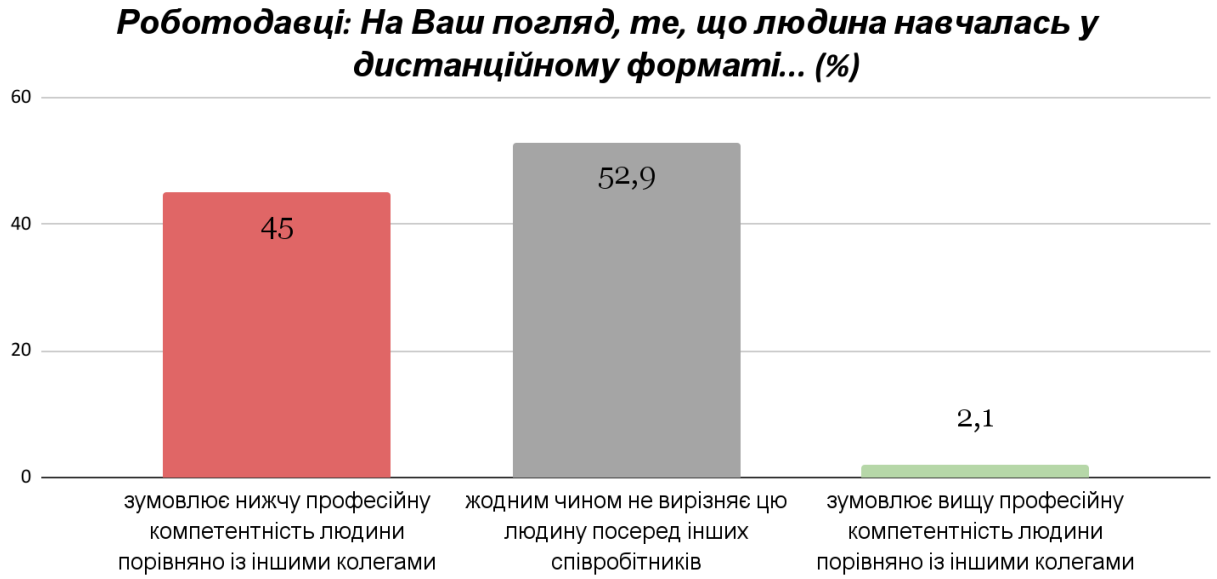

Fig. 4C.

However, despite the generally positive perception of the online format, **a qualified majority** of respondents (69%) said that if necessary, they **would advise** their immediate circle of **acquaintances to study in the traditional**, classroom **format**. A quarter of the respondents said that they did not notice any fundamental difference between the traditional and online learning formats (*see Table 4.3.2*).

Table 4.3.2. Attitudes towards distance education: readiness to recommend (employers)

If a person close to you - one of your children, relatives, friends - asked you for advice on choosing a form of education, what would you say?	***%***
We would recommend a traditional form of education	69,4
We would recommend an online form of education	5,4
You would say that you don't see any difference	25,2
Total	100

It is somewhat controversial that if respondents had **to choose an education format for themselves**, they **would prefer online** learning: 42% of respondents choose the online learning format and motivate this by the opportunity to save time. Perhaps when it comes to additional education, this format may be perceived as optimal. At the same time, traditional education remains the most desirable for various reasons: a quarter said they would choose the traditional format because it is more understandable and convenient for them; 22% of respondents believe that they receive a higher quality education in this way, and 20% consider traditional education to be synonymous with fundamental knowledge and skills:

Table 4.3.3. Choice between online and traditional education (employers)

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If you personally had a need for additional education and were offered a choice between traditional and online forms of the same education, what would you do?	%
arguments in favour of online form of education	
I would choose distance education because it **saves time**	42,4
I would choose distance education, as it is **a more modern option**	13,4
I would choose distance education because it provides **the latest knowledge and modern skills**	11,3
I would choose distance education because it is **easier to study**	6,9
arguments in favour of traditional form of education	
I would choose a traditional education, as it is more **convenient for me**	25,1
I would choose a traditional education, as it **guarantees higher quality results**	22,1
I would choose a traditional education, as it provides **fundamental knowledge and skills**	19,9
I would choose a traditional education because it is **better appreciated by others**	5,2

**respondents could choose several options, so total is >100%*

According to *Table 4.3.4*, **the lack of communication** and face-to-face **skills** is identified by **half of the employers (50%)** as **one of the biggest disadvantages of online learning**. A decrease in organisational and teamwork skills is also perceived as a significant disadvantage by a significant number of respondents: **40% say that distance education can make it difficult to collaborate and interact** in team projects or teamwork.

Table 4.3.4. Disadvantages of distance education (employers)

What are the difficulties and challenges that a massive transition to an online learning format can bring for employers?	%
Lack of communication skills, "live" interaction skills	50,4
Decrease in the level of organisational skills, teamwork and co-working skills	40,3
Decrease in the level of professional knowledge, skills and abilities of graduates	26,1
This makes it difficult to adequately combine work and study	18,5
Lack of self-organisation and self-discipline	12,6
This makes it difficult to attract young professionals to full-time work	10,9
Decreased motivation to work	1,7
Distance education does not cause any specific problems	57,1

**respondents could choose several options, so total is >100%*

Communication skills and organisational skills can be classified as so-called "soft skills", i.e. certain supra-professional skills that are not directly related to professional competence, but help to solve life problems and establish effective teamwork with other people. We can also include the question of the need for motivation and self-organisation - a total of 14% of respondents said that self-discipline and motivation can be difficult in distance education.

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Regardless of the speciality, the availability of "soft skills" is defined as a necessary element in achieving professional success. However, the online format, due to limitations in the organisation of communication and the lack of teamwork, does not provide an opportunity for their active development within the educational process. And the lack of direct contact and interaction can lead to a decrease in organisational skills and teamwork efficiency.

26% of surveyed employers believe that online learning may not provide students with the same **level of professional knowledge and practical skills** as traditional education, which will definitely affect the quality of graduates' training and the quality of work of future employees.

Nevertheless, despite these disadvantages, **the majority (57%)** of respondents say that **distance education does not cause any specific problems**. Representatives of ultra-large companies are 10% more likely to mention disadvantages of distance education than representatives of smaller companies, and also see fewer possible advantages in this format of education.

Table 4.3.5. Advantages of distance education (employers)

What are the real benefits of a massive transition to online learning for employers?	*%*
Promotes the development of digital and technology skills	39,7
Provides an adequate balance between work and study	38,8
Provides skills in mobility, adaptation and flexible working	34,3
Stimulates self-organisation and self-discipline	28,9
Promotes the development of skills for quick information retrieval	28,1
Allows young professionals to be involved in full-time work faster	12,8
Improves the speed of response and completion of work tasks	9,1
Distance education does not provide any specific advantages	23,6

**respondents could choose several options, so total is >100%*

As for **the benefits of distance education** (*see Table 4.3.5*), opinions are more evenly distributed: 40% of respondents believe that the online format contributes to the development of digital and technology skills; 39% see advantages in the fact that the online format allows for an adequate combination of work and study; 34% note as a strength the fact that the non-classroom learning format develops skills of mobility, adaptation and flexible working. And about a quarter of respondents say that distance education does not offer any specific advantages.

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Only a quarter of the surveyed employers tend to believe that they should be involved in the process of organising and controlling distance education. 39% are undecided on this issue, and 35.5% of respondents say that there is no need to involve employers in these processes.

Table 4.3.6. Involvement of employers in the process of organisation and control of distance education (employers)

Does online learning require greater involvement of employers in the process of organising and monitoring?	*%*
Definitely not	10,3
Rather, no	25,2
In some ways no, in others yes	38,8
Rather, yes	21,1
Definitely yes	4,5
Total	100

Analysing the readiness of employers to participate financially in the implementation of distance education (*see Table 4.3.7*), we see that **more than half of the organisations (55%) are interested in developing certified online courses,** online monographs, manuals, etc. (*see Table 4.3.7*). However, **only 26% of them are able to pay for such developments**, which may be one of the obstacles to the development of **distance** education. **Almost 45% indicate a lack of interest in funding methodological developments.**

The situation is similar with the readiness to finance the technical component; however, here we see that a smaller proportion of organisations (11%) have both interest and the ability to sponsor the purchase of servers, software, video labs and other technical equipment for the online format. However, in general, 48% of organisations have at least one aspect (interest or ability) of readiness for sponsorship. State-owned companies have much lower levels of both interest and ability to sponsor (by about 15-25%). Those who are interested in graduates of technical and mathematical fields are 5-8% more interested in funding and 9-12% more likely to have the opportunity to sponsor (no relationship was found for other specialities).

Table 4.3.7. Readiness of employers to finance the development of methodological and technical means of distance education (%)

&	***Creation of certified online learning courses, online monographs, manuals, etc.***	***Purchase of servers, software, video labs and other technical equipment for the online format***
Interesting, and there is such an opportunity	25,6	11,4
Interesting, but there is no opportunity	29,8	**39,5**

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There is no interest, but there is an opportunity	12	10,5
There is neither interest nor opportunity	**32,6**	**38,6**
Total	100	100

Therefore, although there is a certain interest and desire on the part of organisations to develop distance education, there are also limitations in terms of funding for the creation of materials and the purchase of necessary equipment. For the successful development of distance education, it is necessary to look for ways to attract additional resources and partnerships with sponsors, which will provide the necessary technical means and resources.

The majority of the surveyed employers believe that they have the right to formulate wishes and orders regarding the content of curricula (67%) and can be involved in teaching (43%), in supervisory boards and advisory bodies (28%), and participate in the final assessment (28%) (*see Table 4.3.8*).

Table 4.3.8. Participation in the organisation and operation of distance education (employers)

What should be the involvement of employers in the organisation and operation of distance education?	*%*
Employers should formulate wishes and orders regarding the content of educational programmes	66,7
Employers should be directly involved in the teaching process as experts	42,6
Employers should participate in the final assessment of graduates	28,3
Employers should be included in supervisory boards and advisory bodies	27,8

**respondents could choose several options, so total is >100%*

The following observations can be made about the general indicators of companies' involvement in corporate online learning: for small and medium-sized enterprises, the percentage of those who engage in corporate online learning is lower compared to large and ultra-large enterprises. **Large and ultra-large enterprises** have **a higher percentage of in-house** e-learning **programmes** than small and medium-sized enterprises: **66% of (ultra)large enterprises have their own programmes**. The use of external learning programmes is more common among medium and large enterprises (53% in total).

Table 4.3.9. Participation of enterprises in corporate online learning (employers)

Does your company participate in corporate training via online learning programmes?	**Small enterprise**	**Medium-sized enterprise**	**Large enterprise**	**Ultra-large enterprise**

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Yes, it does, and has its **own online learning programmes**	11,8	9,3	18,9	46,7
Yes, it does, using **external learning programmes**	22,4	30,7	21,6	24,4
No, it doesn't	55,3	46,7	40,5	15,6
It is difficult to answer	10,6	13,3	18,9	13,3
Total	100	100	100	100

Representatives of medium and large enterprises are hesitant to answer the question about joining corporate training via online learning programmes. The largest percentage of companies that do not engage in corporate training via online learning programmes is recorded among small enterprises. It should be noted that the reasons for not joining such programmes may vary: financial constraints, access to resources, organisational culture, etc. However, the following fact is obvious: **the larger the enterprise / institution, the higher the degree of involvement in online learning**; the smaller the enterprise, the less likely it is to be involved. However, there is also a less obvious option - the smaller the enterprise, the less interest in corporate e-learning may be.

4.4. Employers' staffing needs

The survey covered such issues as the shortage of young specialised personnel, staffing plans and the need for specialists in various fields.

With regard to **staffing needs** and **the shortage of young specialised personnel** (*see Table 4.4.1*), the following can be noted:

- 22% of employers said that they experience a significant shortage of young specialised personnel and more than half of specialists;
- 48% of employers said that they are experiencing a shortage of young specialised personnel, but the deficit is insignificant and concerns several specialists.

We can also see that a total of **70% of employers feel the need to recruit new staff to varying degrees**. 29% of employers said that they have enough staff to meet all their work needs.

Table 4.4.1. Assessment of the availability of young specialised personnel (employers)

Do you experience a shortage of young specialised personnel?	***%***
Yes, significant, more than half of the specialists are lacking	21,9
Yes, but the deficit is insignificant, there are several specialists lacking	47,5

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No, there are enough young personnel to solve all the tasks	28,5
Other	2,1
Total	100

The survey found that **the majority of employers (60%) plan to maintain the current number of employees** (*see Table 4.4.2*). At the same time, 29% of employers plan to expand their staff, and 7.5% plan to make staff redundant. Based on the data in Table *4.4.2*, the issue of hiring employees is still relevant for most employers, as even if the current number of employees is maintained, there is a need to hire new employees to fill positions that become vacant.

Table 4.4.2. Assessment of the enterprise's human resources prospects (employers)

Does your organisation have any plans to...	***%***
staff redundancy	7,5
staff expansion	28,6
maintaining the number of staff	59,8
Other	4,1
Total	100

The study shows that employers have different staffing needs depending on the field of activity (*see Table 4.4.3*). Graduates of technical, mathematical, economic and management fields appear to be the highest priority for most employers: **52.5% of surveyed employers need staff with a degree in economics or management**; **42% need specialists in technical and mathematical sciences**, which also indicates the high popularity of these profiles in the labour market. 23% of employers feel the need for specialists in natural sciences. 14% of employers noted a shortage of lawyers. 13% need specialists in social sciences and humanities. And only less than 4% of the needs of the sample of employers are for medical personnel.

Table 4.4.3. Needs for specialised professionals (employers)

Specialists in what areas does your organisation need the most?	*%*
Medicine	3,8
Social sciences and humanities	12,9
Law	14,2
Natural sciences	23,3
Technical and mathematical sciences	42,1
Economics and management	52,5

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**respondents could choose several options, so total is >100%*

The majority of employers have no problems with hiring candidates who have obtained distance education. Only 10% of employers prefer candidates who have studied in a traditional form of education. Employers are not so much interested in the way of obtaining education as in the ability to apply the skills acquired during the course of study. Although distance education has its drawbacks, such as lack of communication and teamwork skills or reduced professional competence, most respondents did not mention any specific problems with distance education. However, representatives of (ultra)large companies were more likely to mention disadvantages of distance education compared to representatives of smaller companies.

In general, **distance education is generally perceived positively by employers**, but there are some limitations and challenges. Some employers may be cautious about distance education graduates in some specialised fields that require direct practice or interaction with real-world objects.

This is illustrated in the following way. The surveyed employers were offered the opportunity to formulate their **opinions on the general topic of the survey - distance education**. Systematising their responses, we can note that most of them formulated additional **comments on distance education**, which can be summarised as "**distance education is not complete**" and described in the following theses (we provide our own generalised wording):

- distance education does not provide communication skills and does not socialise;
- distance education can complement traditional education; the best option is blended learning;
- distance education is suitable for emergencies as a forced substitute;
- distance education is ideal for professional development courses, language courses and individual development;
- distance education lacks practical skills.

There were much fewer responses in favour of distance education; they can be summarised in the following two theses:

- distance education can and should be ahead of market and social needs;
- distance education is the safest and most affordable form of education.

In addition, it is worth quoting in full some typical and at the same time original opinions of employers (font emphasis is ours):

Respondent 1: "If we talk about **higher education**, it is **not only** about **knowledge** and **the ability to acquire it**, **but** also about **the ability to communicate with people** you like and dislike, to find a common language and defend your opinion and rights. **Know how to keep your distance.** *Online learning can create* ***a comfortable bubble*** for an applicant, but it can be a problem for getting a job in the future. Also, global trends dictate that *employers want*

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to see people in the office for interaction and better communication. So **students will eventually have to leave their online comfort zone anyway**."

Respondent 2: **"It is impossible to teach professional skills online for doctors, engineers, athletes, chemists, etc."**

Respondent 3: "...**I find part-time study to be the most productive for me** because **a person in this form of study is already working** (in most cases that I know, although for a relatively low salary, they gain practical experience), **and when they receive a diploma, they are much more valuable** than graduates from full-time or online study".

Respondent 4: "**The educational process should not stop just because someone cannot adapt to the current conditions and change their approach or attitude to work**. Education should be progressive, anticipate and shape the needs of the market or society, provide both a fundamental basis and modern practical skills, tools, technologies, and communications."

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Conclusions

Below, we summarise the information on the opinions of different stakeholder groups about distance education by the main components of the most important areas.

1) Technical support for distance education, communication channels and forms of work

This area is important for the groups directly involved in the learning process - students and lecturers. So, the most important points are:

- lecturers, unexpectedly, are somewhat better equipped with the technology required for distance education than students: despite the fact that all students have smartphones, students do not consider them the best option for accessing online classes, preferring computers or laptops. Lecturers are twice as well equipped with desktop computers as students. However, **significantly more lecturers than students point to the need to get or upgrade a laptop or tablet**: the available equipment is outdated or otherwise unable to cope with the important tasks of distance education. In addition, lecturers often lack the necessary software;

- both students and teachers prefer **Zoom** among universal online learning platforms, and **Telegram** among communication channels; however, **Viber** is in second place among lecturers, which is hardly used by students; however, **email** is in second place among students, which is used by lecturers with the same frequency. Such coincidences indicate that external factors for choosing both platforms and channels are common, with Viber representing purely generational differences. It is also **the choice of communication channels that allows us to see the difference between different HEIs at the level of both students and lecturers**: *the table* below *with the average index of acceptability of communication channels* demonstrates, for example, a particularly positive attitude of students and lecturers of LNEU to Office 365, of KNU to Google Classroom and the Electronic Dean's Office, and of LNEU and UNUH to Viber;

- in terms of forms of work, both students and lecturers prefer **online lectures**, but **lecture notes and video recordings** are in second place for **students**, and **Moodle online learning courses** and **interactive materials** are in third place for **lecturers**. It should be emphasised that the first place, as in the case of communication channels, is the same for students and lecturers.

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Table. Index of preference for communication channels between students and lecturers of different HEIs

&	KNEU	LNEU	CPNU	UNUH	KNU	BSNU
Telegram	8,9	8,1	8,9	6,9	9,1	8,7
Moodle	7,8	7,4	8,5	8,2	6,3	9,0
Email-distribution	8,4	8,1	6,9	7,7	7,7	6,1
Google Classroom	5,0	4,9	3,1	3,6	7,6	3,5
Viber	6,1	8,3	5,8	7,9	5,7	5,6
Discord	2,5	3,7	2,9	3,2	2,8	3,2
Electronic dean's office	3,6	4,7	4,6	3,5	5,2	2,7
Instagram	2,8	4,4	3,3	3,5	3,1	3,4
Office 365	4,0	5,2	4,5	3,4	2,6	2,8
WhatsApp	3,5	4,0	2,8	3,6	3,7	3,4
Facebook	2,8	4,1	3,0	3,2	3,0	3,3

(acceptability index of communication channels; min=1, max=10)

2) Problems and difficulties of distance education. In this area, the opinions of the three groups of stakeholders tend to coincide:

- the most frequent complaint of lecturers, students and HEI heads to online learning is **psychological discomfort**, both from the learning format as a whole and from its individual components (in particular, the need to turn on cameras);
- another universal complaint that appeared even in the employers' answers to open questions: **lack of proper communication**, degradation of communication and team skills, and practical components of education;
- **the complaint about the difficulty of self-motivation** to study and work turned out to be **a unifying one**; HEI heads mentioned this problem especially often;
- **increased workload of lecturers,** which is mentioned by students and HEI heads even more often than by lecturers themselves; lecturers often complain about the increase in additional time spent in open questions;
- a specific complaint of lecturers is **the increase in administrative pressure** and formal work.

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It should be noted that these problems and difficulties often cause a sense of contradiction, as the general position of the group in assessing the existence of this problem may deny its magnitude; however, it is prominent in the list of problems.

3) Assessments of distance education.

Emotional assessments of distance education divided students from lecturers and HEI heads:

- students were more likely to react to the transition to online learning either without emotion or with pleasure; lecturers also mostly reacted without emotion, but disappointment took second place, and among HEI heads, those who were upset about the transition were almost as many as those who did not feel any emotions;
- In general, the quality of distance education is assessed by all stakeholder groups to varying degrees as lower than traditional (classroom) education, but HEI heads are the most sceptical; lecturers do not see a fundamental difference between online and traditional forms of education in terms of student performance;
- **lecturers** and especially **HEI heads indicated** that they **preferred to work in the traditional form,** while students were in favour of online learning.

In general, we should note **the contradictory attitude of students to distance education**. On the one hand, a relative majority of students say that this format is more convenient and psychologically comfortable for them. On the other hand, a relative majority (and even an absolute majority in some HEIs) tend to assess education received in this format as of lower quality, and students often mention psychological discomfort among the problems associated with distance education - despite the fact that they consider distance education to be more psychologically comfortable. It can be assumed that psychological discomfort is not related to the form of education, but to the fact of education itself, and in the case of distance education, the level of discomfort is lower for students, unlike for academic staff and HEI heads.

The attitude of employers to distance education is also **controversial**:

- on the one hand, most employers do not see any problems with a position being held by a person who has obtained a degree in an online format. It seems that employers are primarily interested in the ability to apply the skills acquired during their studies rather than the way of obtaining education. Staffing decisions of almost 70% of employers will not change in any way due to the emergence of job applicants with an "online diploma";
- but, at the same time, if they need to recommend a form of education for a family member, again, 70% of employers will recommend traditional education rather than distance education. In addition, 45% of employers believe that distance education leads to lower professional competence of a person compared to other colleagues.

Thus, among the surveyed employers, there is a group of those who do not see the decline in professional competence as an obstacle to hiring a person. Given that employers consider the

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lack of communication and teamwork skills to be the biggest disadvantages of the online format, it can be assumed that these **are the main reasons for employers' scepticism**. This scepticism is purely "practical", so it is not recorded at the level of generalised questions, which are more likely to relate to the principles of recruitment as something fundamentally abstract. Nevertheless, employers are interested in distance education, and the share of those who consider it useful to be involved in the organisation of distance education, although not predominant, reaches about a third of respondents, depending on the specific question.

The question of **the cost of online learning** compared to full-time and part-time education clearly divided students and employers from other stakeholders. Lecturers and HEI heads almost equally (51-53%) favoured the same cost of online learning as full-time education, while 61% of students chose the option "cheaper than full-time, but more expensive than part-time". This difference would seem to be a self-evident truism if it were not for the fact that employers are much closer to students in their opinions. Probably, these two groups are united and opposed to lecturers and HEI heads by the fact that they - employers and students - are the actual consumers of educational services, while lecturers and HEI heads act as producers and sellers of these services. Thus, we have a specific echo of the modern version of the industrial class conflict.

Table. Estimation of the cost of online learning (%)

According to you, the cost of online higher education should be...	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
the same as of face-to-face (full-time) education	18	**51,4**	**53,3**	19,4
lower than of face-to-face (full-time) education, but higher than of part-time education	**60,5**	35,3	33,6	**47,9**
the same as of part-time education	21,5	13,2	13,1	32,6
Total	100	100	100	100

The option with a lower price of distance education was more often chosen by those who consider it to be an imitation of real education and the quality to be lower than traditional forms. Respondents were asked to rate their agreement with the proposed theses on distance education: this was an additional measure of **the perception of distance education** by different stakeholder groups, which is presented in *the comparative table on attitudes towards distance education*. **Students are** more **optimistic** than other groups. Although a significant number of reactions to the proposed theses are balanced - for half of the theses, the largest shares of each group agree with the thesis in some aspects and disagree in others - students are more likely to recognise distance education as universal, more modern, and the "education of the future", while HEI heads and employers are more likely to agree that distance education does not allow for trustful communication with students, is of lower quality, and can even be considered an imitation of real education.

Table. Attitude towards distance education (%)

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Do you agree that distance education is...?				
positive statements				
... better suited to the requirements of modern society than the traditional one?	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	27,6	31,7	28	**46,3**
In some respects agree, in others disagree	**36,6**	**46**	**53,3**	36,4
Agree (fully or partially)	**35,9**	22,3	18,7	17,4
universal for almost all specialities of higher education	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	30,4	**50,4**	**63,6**	**57**
In some respects agree, in others disagree	30,6	32,8	23,4	23,6
Agree (fully or partially)	**39**	16,8	13,1	19,4
the higher education of the future	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	27,5	32	27,1	**47,9**
In some respects agree, in others disagree	30,3	**35,2**	**42,1**	23,1
Agree (fully or partially)	**42,2**	32,9	30,8	28,9
negative statements				
preventing the development of trusting communication with students	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	**38**	32,6	25,2	**39,7**
In some respects agree, in others disagree	30,2	31	31,8	23,1
Agree (fully or partially)	31,9	**36,5**	**42,9**	**37,2**
not able to provide the same quality of knowledge, skills and abilities as traditional education	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	**38,5**	30,7	**40,2**	**37,2**
In some respects agree, in others disagree	28	33,7	30,8	23,6
Agree (fully or partially)	33,5	35,5	28,9	**39,3**
only an imitation of the learning process	**Students' opinion**	**Lecturers' opinion**	**HEI heads' opinion**	**Employers' opinion**
Disagree (fully or partially)	**60**	**59,9**	**70,1**	**57,9**
In some respects agree, in others disagree	22,9	24,6	23,4	22,3
Agree (fully or partially)	17	15,5	6,6	19,8

The cross-tabulation and correlation analyses show that **distance education**, regardless of the wording of a particular question, **is** (so far) **evaluated in comparison with the traditional form**, and not as an independent type of education. It is worth noting that the responses of academic staff and HEI heads to the theses proposed in the table are strongly **related to the**

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emotional attitude to the transition to distance education. At the same time, **male** lecturers are significantly **more sceptical** about the assessment of distance education compared to women (by 10-20%). Also, those lecturers whose working conditions are worse were more likely to agree with negative statements. Those who agreed with the positive statements are more interested in all the proposed areas of professional development. There is a clear correlation between responses to the above statements and **assessments of student performance**: those who are optimistic about the effectiveness of student work are also optimistic about distance education as such, and vice versa. Among the universities, **the most pessimistic** about distance education is **CPNU**, while the most **optimistic** are **KNEU** and **KNU**. There is no connection between the answers to the evaluation theses and the position, salary and work experience.

Students' answers to the questions about evaluation theses also do not depend on formal parameters. Students who **combine study and work** are **more optimistic** about distance education. The connection with **the speciality** is very strong: **the highest** marks for distance education are given by representatives of **technical, mathematical, economic and management specialities**, while **medical students** evaluate distance education **the worst**. Students and lecturers of **KNEU** are **the most optimistic** in their assessment of distance education. KNEU heads are also optimistic about distance education; their colleagues from BSNU are the leaders in terms of scepticism; at UNUH and KNU the distribution of assessments is even, but polarised - there are few average assessments. Men in this group are also more sceptical than women, as in the case of academic staff. The same is true for the **employers'** group; thus, **gender did not affect only the students' assessments**. Large and medium-sized enterprises are significantly more sceptical than small and ultra-large ones. Representatives of those firms where the majority of employees can work remotely are the most optimistic about distance education.

Summarising, it should be noted that stakeholders are generally ready to introduce distance education as a separate form of education, but their readiness is not uniform. Students are quite optimistic about distance education, focusing on its practicality and comfort, but realising its lower quality. HEI heads and academic staff also see the problem of lower quality of knowledge and skills acquired in the online format, and emphasise a number of problems (organisational, technical, psychological, etc.), but at the same time understand the feasibility and rationality of this format, so they are ready to implement it. Employers at the personal level prefer the traditional format, but at the institutional level are ready for the massification of distance education and are to some extent interested in participating in its improvement. Although there is a strong differentiation in attitudes towards distance education among representatives of different fields of education, different HEIs, etc., for the majority of stakeholders, distance education has already become a habit that they are ready to formalise.

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