CHALLENGES AND BENEFITS OF DIGITAL LEARNING: PERSPECTIVES FROM PROFESSORS AT A TWICE-DISPLACED UNIVERSITY DUE TO WAR

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This study investigates the challenges and benefits of digital learning from the perspective of lecturers at Luhansk Taras Shevchenko National University, an institution that has been twice displaced due to military aggression. Over the past decade, the lecturers have experienced forced transformations in educational delivery, including a full year of distance learning in 2014, a transition from blended to traditional modes, and subsequent digital adaptations during the pandemic and ongoing military aggression. This unique experience provides insights into the irreversible digitalization processes occurring in higher education. Examining the views of lecturers with such exposure can form predictions about the future trajectory of universities.

The research employed an online questionnaire distributed via the LimeSurvey platform to survey the academic staff. Key areas of inquiry included assessing lecturers' readiness for digital learning, peculiarities of organizing digital learning at the institution, challenges encountered, utilization of digital tools, and perspectives on the future role of digital learning.

The study findings highlighted the need to increase interactive and active teaching methods in digital formats, adapt learning content, and redefine the lecturer's role as a facilitator while maintaining structured student-instructor interactions to ensure quality outcomes. A recommended hybrid model flexibly combines mixed formats, synchronous, and asynchronous interactions. The results indicate that lecturers' mindsets have evolved through their experiences at twice-displaced university, fostering a new vision of the digital university paradigm.

Key words: digital learning, displaced university, distance learning, hybrid learning, educational process, pedagogical forecasting.

Стаття присвячена дослідженню викликів та переваг цифрового навчання очима викладачів двічі переміщеного внаслідок військової агресії університету – Луганського національного університету імені Тараса Шевченка. Цей досвід є унікальним, викладачі університету протягом останніх 10 років були учасниками багатьох вимушених трансформацій в організації навчального процесу: у 2014 р. протягом року навчання повністю відбувалось у дистанційній формі, поступовий перехід від змішаного навчання до традиційного навчання засвідчив зміни не тільки в організації навчання але й у свідомості викладачів, їхнього відношення до використання цифрових технологій в навчальному процесі. Подальший досвід використання цифрових технологій під час пандемії та внаслідок військової агресії підтверджує твердження про незворотність трансформаційних процесів в освіті, які пов'язані з цифровізацією. Тому вивчаючи погляди викладачів з таким досвідом можна прогнозувати майбутній розвиток університетів.

Опитування науково-педагогічних працівників відбулось за допомогою методу онлайн анкетування на платформі LimeSurvey. Ключовими напрямками дослідження були визначення рівня готовності викладачів до цифрового навчання, особливості організації цифрового навчання в університеті, визначення проблем при цифровому навчанні, використання цифрових інструментів, візія майбутнього цифрового навчання. Результати дослідження засвідчили необхідність збільшення використання при цифровому навчанні взаємодії та активних методів навчання, необхідність адаптації навчального контенту та зміни ролі викладача та тьютора на роль фасилітатора, але з іншого боку необхідність спеціально організованої взаємодії викладача та студента для забезпечення якісного результату навчання. Рекомендована модель організації навчання – гібридна, де гнучко поєднуються змішані форми, синхронна та асинхронна взаємодія.

За результатами дослідження можна зробити висновок про зміни свідомості викладачів, які мають досвід організації екстремального університету та формування у них нової візії цифрового університету.

Ключові слова: цифрове навчання, переміщений університет, дистанційне навчання, гібридне навчання, навчальний процес, педагогічне прогнозування.

Introduction. Digitalization today penetrates all aspects of our lives, becoming an integral part of every societal sphere. It continuously alters our perception of ordinary processes and phenomena, transforming them beyond recognition. One of the most significant areas where digital technologies have a substantial impact is education. Educational processes cannot remain indifferent to these changes and are adapting to contemporary demands by integrating new technologies and methodologies.

Digital learning, like any other novel phenomenon, has its unique advantages. It enables the educational process to become more accessible and flexible, opening new opportunities for students and educators. However, digital learning also presents new

challenges to participants in the educational process. Successful implementation of these opportunities requires specific conditions. Additionally, questions arise regarding the effectiveness and quality of education, issues of motivation, self-discipline, and interaction within the virtual environment.

Issues of Digital and Blended Learning have been extensively studied by numerous researchers. In (Lin et al., 2017), the impact of digital technologies on students' performance and motivation is examined. It is noted that digital tools offer new possibilities in the educational process, primarily the ability to organize individualized approaches. Blended learning, as a flexible form, is described in (Kumar et al., 2021), where survey results conclude that students are satisfied with this form and it provides them with new learning opportunities. The peculiarities of organizing digital learning in higher education and its transformation are addressed in (Alenezi, 2023), where digital learning is considered as part of the ecosystem of modern higher education. The digital learning environment is discussed in (Brown et al., 2015). The functionality of LMS is analyzed, showing the practicality of using various digital tools and integrating them into the core LMS. The (Scheel at al., 2022) investigates the conditions for effective organization of digital learning and argues for the necessity of developing students' skills in self-organization, self-learning, and digital literacy.

General issues and the consolidated experience of displaced universities are discussed in (Kurylo at al., 2019), where the presence of a distance learning system is identified as a crucial factor for the university's operational recovery.

This article serves as a logical continuation of research in (Semenov, 2019), which addressed the issue of ensuring the quality of digital learning from the perspective of education seekers.

Twice-displaced higher education institutions possess a unique experience in organizing digital learning. They acquired their first experience during the initial displacement when digital learning became a pivotal element in organizing the educational process. Transitioning from digital to blended, and then to in-person learning, transformative processes occurred, altering the perception and understanding of digital learning and its place in the modern university. The pandemic highlighted the main challenges and opportunities of digital learning for organizing the educational process and ensuring its quality. However, for the displaced university, this challenge did not pose a problem, demonstrating readiness for rapid adaptation.

The second displacement, resulting from the full-scale aggression of the Russian Federation in 2022, and the swift recovery of the educational process in the university to some extent, were facilitated by the prerequisites established earlier: the presence of educational content in the cloud, a functioning system for organizing and supporting digital learning, and the faculty's ability to work in conditions of digital learning.

Consequently, after operating for two years under these new circumstances, the university's faculty members solidified a revamped vision of higher education and a reimagined conception of digital learning's role within it.

To formulate and implement this new vision, it is worthwhile to investigate educators' attitudes toward digital learning and attempt to generalize their

perspectives. Therefore, this article examines the results of a study among faculty members of the state institution "Luhansk Taras Shevchenko National University" conducted from February to April 2024.

Objective: The aim of this article is to conduct a study to determine the perceptions of digital learning, its advantages, and challenges from the perspective of academic staff at a specific university that has been displaced twice due to military aggression.

Research Objectives:

• Assess the degree to which educators are prepared and adapted for integrating digital learning methodologies into their teaching practices.

• Examine the primary challenges and obstacles faced by both instructors and students when transitioning to digital learning environments.

• Investigate the extent of utilization of digital tools and technologies in the educational process.

• Explore how the roles of teachers and tutors are evolving, shifting from traditional instructors to facilitators within the context of digital learning.

Methods/Instruments: To survey the professors at Luhansk National University, an online questionnaire was administered via the LimeSurvey platform. The single questionnaire comprised 26 questions, with 8 being open-ended. It was divided into the following sections: preamble, assessment of professors' readiness for digital learning, peculiarities of organizing digital learning at the university, identification of problems in digital learning, digital tool usage, and envisioning the future of digital learning and a new vision for the university. The anonymous survey involved 131 respondents, representing 20% of the university professors, who were nearly evenly distributed across 10 academic institutes according to staff numbers:

● Educational and Research Institute of Arts – 12 (9,2%);

● Educational and Research Institute of Business and Management – 11 (8,4%);

● Educational and Research Institute of Health Care and Sport – 13 (9,9%);

● Educational and Research Institute of Mathematics and Information Technologies -13 (9,9%);

● Educational and Research Institute of Natural and Agricultural Sciences -14 (10,7%);

● Educational and Research Institute of Pedagogy and Psychology – 21 (16%);

● Educational and Research Institute of Philology and Journalism -15 (11,5%);

● Educational and Research Institute of Public Management and postgraduate Education – 5 (3,8%)

● Educational and Research Institute of Social and Humanitarian Sciences – 13 (9,9%);

● Educational and Research Institute of Technology and Commerce – 14 (10,7%).

All respondents hold higher education degrees, with 75% possessing research academic degrees (Ph.D+).

Distribution of respondents by gender:

- Male: 48 (37%);
- Female: 83 (63%).

   The age distribution of the surveyed professors:
- 25-34: 8 (6%);
- 35-44: 41 (31,3%);
- 45-54: 47 (35,9%);
- 55- …: 35 (26,8%).

This distribution generally corresponds to the existing state of the university's staff. The majority of respondents have been working since 2014 and have experience in implementing digital learning. Therefore, this pilot study does not claim to be representative, but rather aims to identify new perspectives and trends regarding digital learning.

Results. Respondents were given the opportunity to express their attitude toward statements defining possible development strategies for the university. In response to the question "Do you support the idea that in conditions of insufficient material resources, the development of digital learning should become a priority?" 74.42% of respondents answered "Yes," 9.3% - "No," and 16.28% did not specify. This indicates the formation of a new vision of the university as digital among the vast majority of teachers. It should be noted that the majority of those who did not specify their response are almost twice as many as those who oppose the priority of digital learning.

The results of the response to the question "How do you rate your level of proficiency in digital learning skills? Rate on a five-point scale, where 1 point - no proficiency at all, and 5 points - full proficiency" are presented in Figure 1.
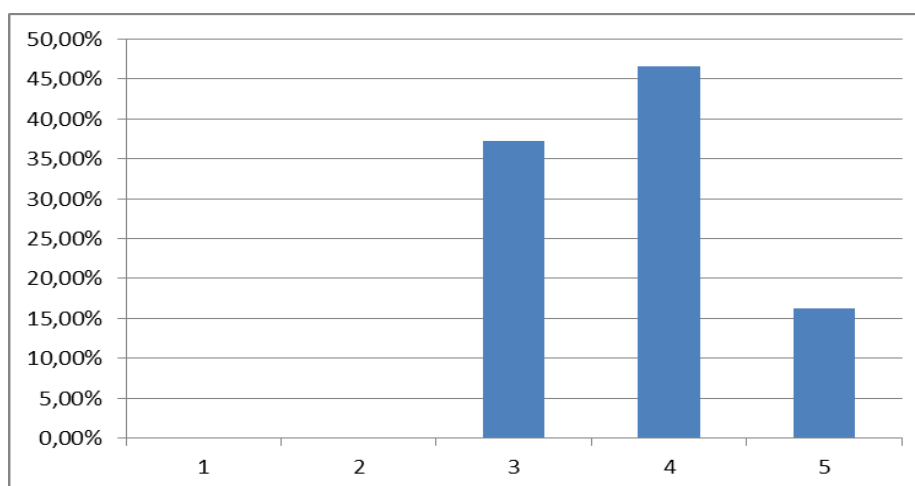

Figure 1. *Self-assessment of professional digital competence (1 - minimum level, 5 - maximum level)*

As seen from Figure 1, a significant number of teachers recognize the need to improve their level of proficiency in digital learning skills, which is natural considering that digital technologies are constantly evolving and new opportunities

arise, particularly for organizing the educational process.

The summarized responses to the "Yes/No" type questions are presented in Table 1.

As we can see from Table 1, the maximum ratings were obtained for questions about the necessity of adapting digital course materials, the possibility of objective assessment in digital learning, the need for digital literacy among students, and the necessity of introductory lectures at the beginning of the course. The minimum support from teachers was received for questions about the ability of modern students to organize their own learning process independently and the necessity of recording educational videos. Interestingly, every fifth respondent did not specify their opinion on the need for recording educational videos

Table 1. *Percentage of positive and negative responses to the survey questions*

Question	Percent (%)		
	Answer options		
	"Yes"	"No"	"No answer"
Can a student organize their own learning process?	27,91%	69,77%	2,33%
Should the teacher take into account the student's completion of external courses when assessing their own course?	62,79%	37,21%	0,00%
Is adaptation of course learning components necessary (i.e., guidance on types of activities in the course materials)?	93,02%	6,98%	0,00%
Do you agree that at the beginning of each course, a separate introductory lecture should be held to address organizational matters?	76,74%	23,26%	0,00%
Do you support the idea of recording your own lectures on video?	44,19%	34,88%	20,93%
Do you believe that the teacher is obligated to provide a weekly schedule, class timetable outlining the digital course's learning process?	60,47%	39,53%	0,00%
Do you think objective assessment is possible in distance learning?	81,40%	18,60%	0,00%
Do you need additional knowledge and competencies in digital learning?	72,09%	18,60%	9,30%

A separate group of questions explored the importance of various elements of the LMS Moodle from the perspective of teachers. The results of responses to this group of questions are presented in Table 2.

Table 2. *Importance of digital course activities from the perspective of teachers*

Digital course activities	Importance of the factor				
	1	2	3	4	5
Lesson	4,65%	2,33%	6,98%	16,28%	69,77%
Assignment	0,00%	0,00%	0,00%	9,30%	90,70%
Quiz	0,00%	2,33%	6,98%	27,91%	62,79%
Forum	18,60%	20,93%	25,58%	20,93%	13,95%
Chat	20,93%	20,93%	25,58%	11,63%	20,93%
Seminar	6,98%	4,65%	23,26%	20,93%	44,19%
File	6,98%	2,33%	18,60%	18,60%	53,49%
URL	4,65%	6,98%	20,93%	32,56%	34,88%
Video	9,30%	4,65%	20,93%	18,60%	46,51%

The obtained results (Table 2) are compared against the findings for a similar group of questions given to students, as reported in (Semenov, 2021), with the corresponding student results presented in Table 3.

Table 3. *Importance of digital course activities from the perspective of students (Semenov, 2021)*

Digital course activities	Importance of the factor				
	1	2	3	4	5
Lesson	2,4%	7,1%	23,8%	21,4%	45,2%
Assignment	2,4%	0,0%	19,0%	40,5%	38,1%
Quiz	2,4%	7,1%	7,1%	31,0%	52,4%
Forum	31,0%	11,9%	26,2%	23,8%	7,1%
Chat	31,0%	14,3%	21,4%	28,6%	4,8%
Seminar	14,3%	11,9%	21,4%	38,1%	14,3%
File	4,8%	2,4%	21,4%	31,0%	40,5%
URL	14,3%	9,5%	33,3%	28,6%	14,3%
Video	14,3%	7,1%	26,2%	11,9%	40,5%

As seen from Table 2 and Table 3, traditional elements of LMS Moodle have approximately equal significance for both teachers and students. However, there is a clear tendency for them to be more significant for teachers. An analysis reveals a negative trend in students' attitudes toward active learning methods, potentially indicating insufficient preparation. It is also plausible to assume an underutilization

of interactive elements, as students have not yet developed a positive disposition toward them.

This correlates with the results of responses to the question: "How independent do you think a student can be? (5 - maximum score)", presented in Figure 2.
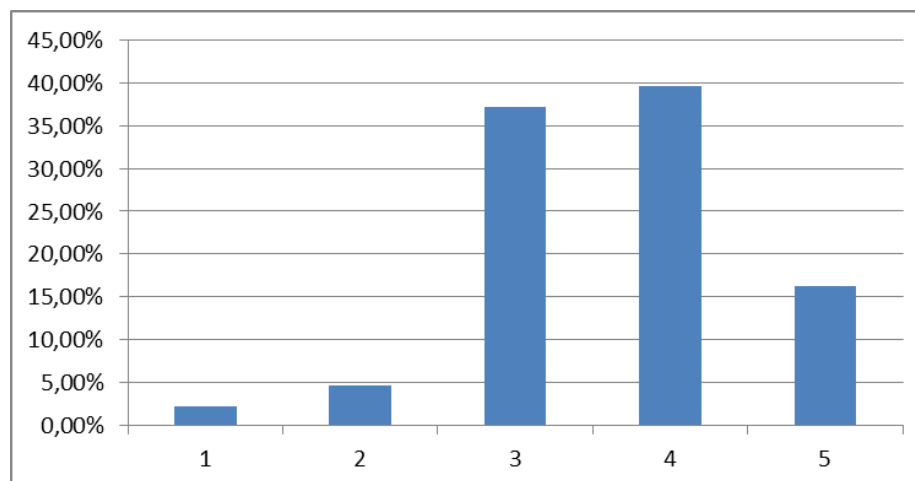

Figure 2. *Distribution of answers to the question "How independent do you think a student can be?"*

All the teachers who participated in the survey agree with the idea that a student should have the opportunity to enroll in paid/free courses of other educational institutions in Ukraine and worldwide, but no one chose the answer option where these courses would be prioritized. 79.07% of teachers consider university studies to be of higher priority, while 20.93% indicate equal priority between university and extracurricular learning. However, 37.21% believe that extracurricular learning should not impact grades for university courses. On the question of providing additional credits for extracurricular achievements (such as publications, competition wins, personal projects, etc.), respondents were evenly divided, with 51.16% expressing willingness to provide such recognition, revealing an even split on this issue.

To the question "Do you think a teacher should define the trajectory of learning in a course, including fixed deadlines and the order of completion by students of each lecture, assignments, and other activities?" 41.86% answered "Yes, for all types of activities", while 55.81% answered "Yes, but only for the most significant types of activities". The number of those who do not consider it necessary to limit deadlines is 2.33%. This also indicates that, in the opinion of teachers, most students today lack self-control and self-organization skills.

The next question "Should a learner adhere to recommendations (methodological, organizational, psychological, etc.) during distance learning?" Answer "Yes, follow the recommendations provided by the teacher in the course" was chosen by 60% of respondents, "other recommendations in general access" - by 33%. 7% of respondents believe that students can learn independently.

Figures 3 and 4 show the priority means of communication with students for

teachers and the preference for a blended format of synchronous and asynchronous learning.
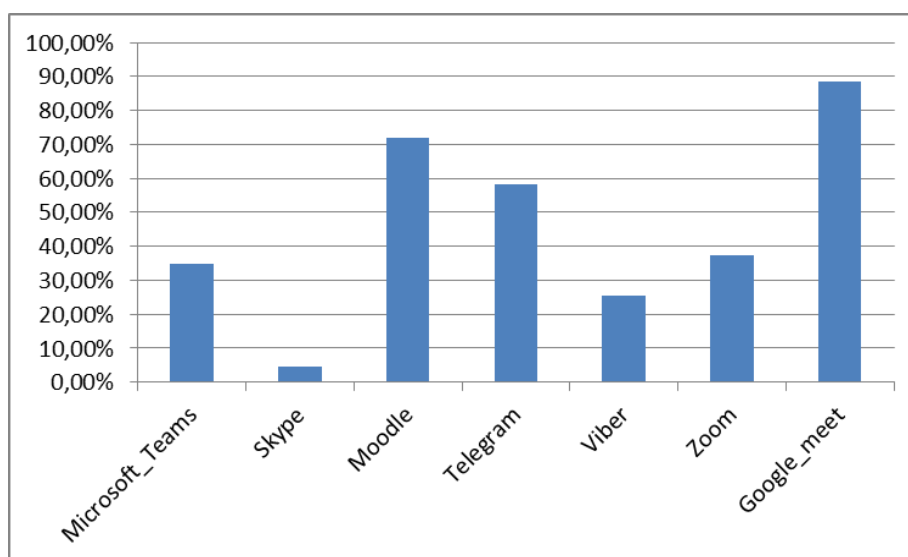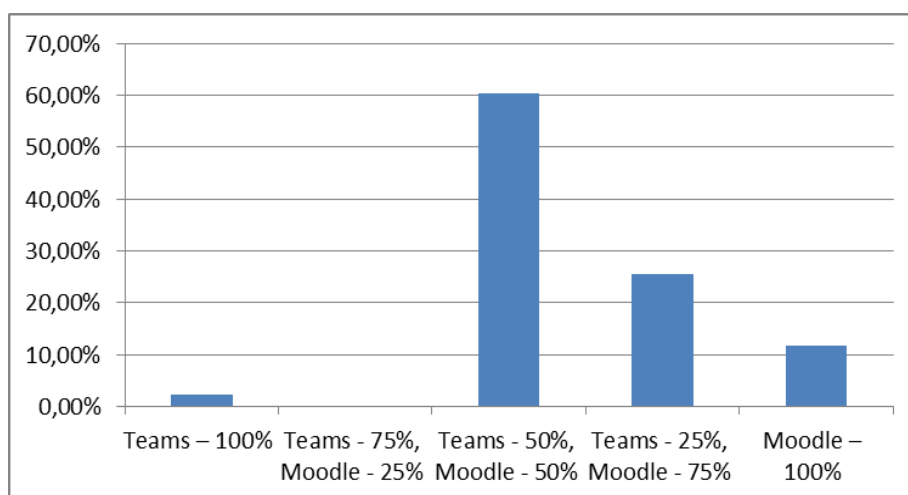

Figure 3. *The priority means of communication*

Figure 4. *Priority ratio of Microsoft Teams and Moodle in digital learning*

As illustrated in Figures 3 and 4, teachers do not favor online learning or blended learning models that prioritize online components. Instead, they prefer an asynchronous approach, which somewhat contradicts their belief that students lack self-study skills. One potential explanation for this preference could be the excessive workload teachers currently experience with the existing digital learning organization and a lack of regulated academic workloads. This aligns with the survey results, which reveal that 11.63% of teachers constantly feel exhausted during digital learning, while 60.47% experience exhaustion occasionally.

In response to the question "Do you teach subjects that do not require a computer?" 72% answered "No." Among those who answered "Yes," an equal number had either few or more than three such subjects. The answer to this question indicates that digitization applies to almost all academic courses. However, this question goes

much deeper, continuing the discussion about the possibility of digital learning for certain disciplines, hence requiring blended and hybrid forms of teaching for these subjects.

An interesting aspect is the investigation of teachers' views on the necessary volume of a course. According to the survey results of teachers, on average, a course should contain 6.14 printed sheets of educational information (first quartile – 1; second quartile (median) – 2; third quartile – 6). Comparing this with the survey of students: a course should contain 3.75 printed sheets of educational information (first quartile – 1; second quartile (median) – 2; third quartile – 3.5).

Figure 5 shows the distribution of responses to the question "Should learners take notes on the learning material in Moodle courses? In what volume?"
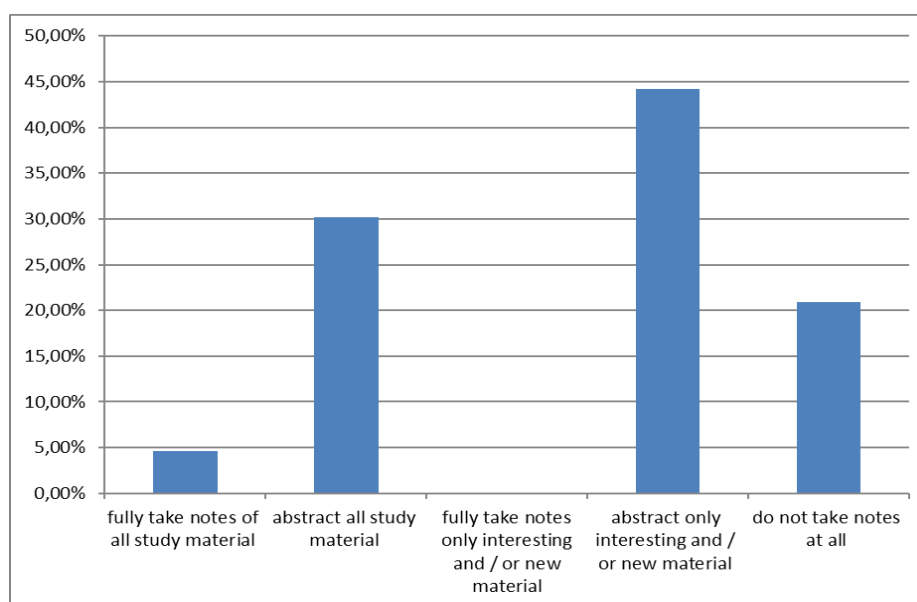

Figure 5. *Necessity of taking notes of educational material*

As seen from Figure 5, the prevailing opinion is that note-taking should be concise—either for all material or at the student's discretion. At the same time, 76.74% believe that the volume of educational literature in existing digital courses is sufficient.

An analysis of teacher attitudes towards active interaction and active teaching methods revealed that a significant majority (67%) of respondents endorsed the concept of peer learning, believing that collaborative work can contribute to successful student mastery of the material. However, a minority (25.58%) expressed reservations about unguided group work, unless explicitly stated to involve in collaboration practice.

100% of respondents chose options involving the student's personal opinion. 74.42% believe that the student's opinion should be considered in some aspects of the learning process, but not in all. 23.26% believe that the student's personal opinion should have the highest priority.
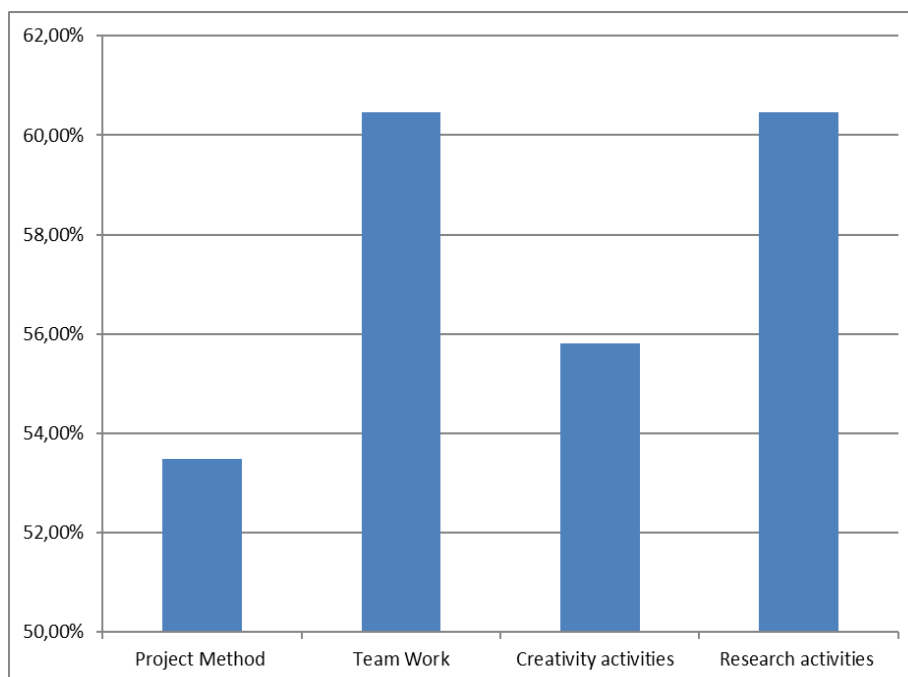
Figure 6. *Responses to the question "Which active learning methods would you like to see more often in digital courses? (Choose one or more options)"*

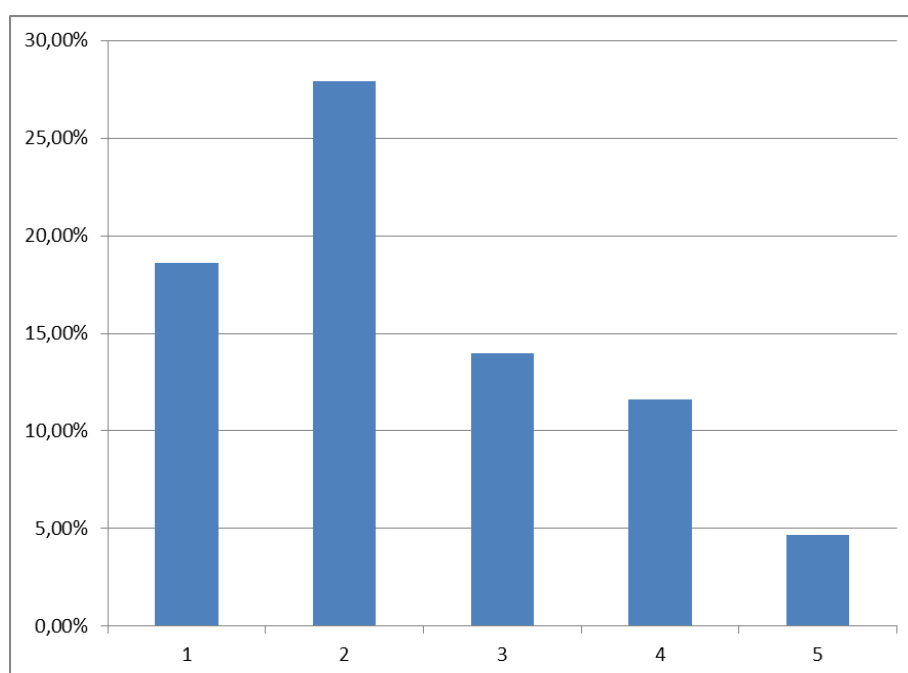Figure 7 illustrates the need for support services among teachers.

Figure 7. *The Need for Technical Support Services for Teachers*

The analysis of open-ended questions in the survey confirms the results obtained for other questions but provides additional information for analysis.

The responses to the question "What new opportunities would you like to see in distance learning using Moodle, Teams, and other digital technologies?" revealed a

prevailing sentiment of satisfaction with existing tools. However, several noteworthy suggestions emerged. Respondent ID=11 highlighted the need for "quick feedback mechanisms, use of instructional videos etc." Respondent ID=63 proposed "the capability to use video materials such as YouTube in the Teams working process." Additionally, Respondent ID=81 advocated for "increased accessibility through the development of online courses leveraging Open Educational Resources (OER)" and the potential of "the use of artificial intelligence".

As for the question "What motivation should students have during distance learning?", the responses revealed a prevalence of the following themes:

- "Desire to learn; to discover something new; to broaden one's horizons; a decent scholarship is also motivation." (ID=10);
- "Cooperation and interaction. Students need to understand that cooperation and idea exchange are very important. Not only should the teacher give assignments to students, but students should also actively participate in the process. For example, group tasks and projects can create a sense of community, even in a virtual environment" (ID=49);
- "The ability to choose a convenient time for learning independently (but strict adherence to key deadlines), the ability to format answers as digital content with further demonstration to others (not only written works or presentations)" (ID=71);
- "Motivation for learning. This is the most important motivation that determines the student's attitude towards learning and their desire to succeed. The student should understand the importance of education and what it can give them in the future. Motivation for self-improvement. Distance learning allows students to independently manage their learning and develop their skills and knowledge. The student should be motivated for self-improvement and striving for self-improvement. Motivation for interaction. Distance learning involves interaction between students and with the teacher. The student should be motivated to interact, to receive support from others, and to realize their potential capabilities" (ID=81).

The following responses are representative examples obtained from the question "How, in your opinion, can we address the issue of students using false excuses to avoid studying?":

- "By achieving a high level of trust between the student and the teacher." (ID=25);
- "To log in without avatars" (ID=27);
- "Sometimes, students find it uninteresting, or they lack motivation to study. Therefore, it is necessary to create a friendly and supportive atmosphere in classes. Providing and creating relevant illustrative content, initiating discussion processes, offering problem situations that stimulate thinking and collaborative problem-solving." (ID=84);
- "I take it calmly. Responsibility is currently low for everyone." (ID=64);
- "There's no way, unfortunately." (ID=88).

Perspectives on the feasibility of concurrently pursuing external courses alongside university studies were investigated through the question "How do you

envision simultaneous completion of external courses with university courses?" The responses presented below offer a range of viewpoints:

- In free time from the main learning process, after classes, during holidays, and on weekends." (ID=23);
- "In free time from the main learning process." (ID=26);
- "The learner can coordinate their learning on courses with the educational process (informing teachers of absence from classes for a valid reason and having the opportunity to make up for missed classes independently)." (ID=62);
- "In accordance with university regulations and procedures. It is also possible to preliminarily coordinate the completion of a certain course with the teacher and the directorate to credit it at the end of the semester as part of the curriculum or an elective discipline (if it coincides in competencies and credits)." (ID=71);
- "The student should be free to choose courses for study and set priorities independently." (ID=94).

What role do textbooks play in digital learning in your opinion? Briefly describe your attitude:

"Very important role" - most respondents.

- However, there are those who wrote:
- "Minimal" (ID=88 and others);
- "In digital learning, textbooks play an important role: digital textbooks provide access to learning materials from anywhere and at any time; many digital textbooks include interactive elements such as videos, audios, tests, interactive tasks, and other multimedia elements that make learning more engaging and effective." (ID=54);
- "Textbooks must be mandatory in the learning process because they make learning academic." (ID=62);
- "I think that a list of literature should be present, however, as practice shows, students rarely use them. Currently, schemes, videos, pictures, summaries, etc., are important." (ID=85);
- "Students should have everything necessary for learning, including textbooks. Educational material quickly becomes outdated, so it's hard to recommend one or several textbooks. Therefore, in my opinion, we should not focus solely on textbooks." (ID=94).

In your opinion, what needs to be done to ensure objective assessment in Moodle?

- "Oral communication" (ID=26);
- "Return to traditional assessment methods using digital tools. Individual interviews." (ID=32);
- "Tests and online exams (as interviews, without preparation)" (ID=79);
- "Create appropriate tasks and tests where it is impossible to guess the correct answer, and creative thinking is required to solve these tasks. This is possible only if the theoretical material is mastered." (ID=84);
- "Offer students various types of tasks: testing, written assignments, practical exercises, etc." (ID=92);
- "Communicate personally with the learner, provide creative tasks" (ID=110).

As we can see, the responses to the questions are diverse, and it is necessary to note the differences in the perceptions of different teachers, which is quite normal for the creative educational sphere.

Discussion. This study examined the advantages and challenges of digital learning for professors at a twice-displaced university. The main results indicate that the existing experience of the faculty staff is unique and can be used as a basis for predicting the future of universities in general and digital learning in particular. The experience gained from 2014-2024 confirms the hypothesis that the quality of digital learning is influenced by its advantages, but only under the condition of well-thought-out organization of such learning.

Among the factors influencing quality, the following should be noted: lecturers' readiness to implement digital learning, the presence of digital literacy and professional digital competence, and the ability to use appropriate digital tools. The obtained research results indicate that the challenges of digital learning stem from the insufficient adaptation of digital learning content, difficulties in forming motivation and self-motivation of learners, insufficient use of active learning methods and lack of organized facilitation during the learning process.

The data obtained are consistent with the studies (Lin et al., 2017) and (Alenezi, 2023), which emphasize the need to build a special educational environment for digital learning and form a flexible system of combining or alternating blended and hybrid learning. However, the experience gained has no direct analogues, allowing for the description of a new vision of digital university, where the differences between traditional and digital learning are diminishing each year: digital learning is moving towards traditional, and traditional learning is moving towards digital - resulting in a predicted hybrid learning where any learning is impossible without digital tools and methods.

The limitation of the study is the small sample size and the impossibility (hopefully) for other universities to replicate the experience of displacement due to military aggression. However, the results obtained can be used not only in predicting the future of universities and digital learning. Practically, this can help in developing new strategies for the prospective development of universities and ensuring the quality of digital learning.

Future research should focus on studying the impact of new digital learning opportunities, particularly artificial intelligence, on creating digital learning environments with their new possibilities and challenges.

Therefore, the presented study confirms the importance of studying the influence of various factors on the effectiveness of organizing digital learning in a university.

Conclusion. This study, conducted through a survey of professors from a twice-displaced university, emphasizes the critical role of digital technologies in the learning environment for such institutions. The professors' experience underscores the potential for a transformed future of university vision - one in which digital learning is based on the use of active learning methods and the application of a hybrid model of blended learning with flexible integration of synchronous and asynchronous interactions. Any learning environment must encapsulate digital platforms, digital

tools, and technologies for implementing digital learning. The quality of future education will depend on the proper organization of digital learning. These findings contribute to the growing body of evidence indicating a close connection between the future of universities and the ongoing processes of digitalization in education.

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