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REMOTE ASSESSMENT IN UKRAINIAN HIGHER EDUCATION INSTITUTIONS: Case study

Inna Kocha[1], Nataliia Baidiuk[2],
Nataliia Stepanova[2], Yuliia Nenko[3]

ABSTRACT

This study narrates the implementation of remote assessment during the COVID-19 pandemic education in Ukrainian higher education institutions, based on the reflections of 600 students and 150 educators. A wide range of student and faculty members experiences from Ukrainian higher education institutions were aggregated and analyzed. The data were collected through the Google Forms survey. The research focuses on the Ukrainian experience with implementing pandemic learning designs, technological solutions, evaluation systems, and academic integrity measures. The current study also looks at the various technological interventions to teaching, learning, and assessing that have been introduced or continued in higher education institutions around the world, and how they may have helped reduce the likelihood of students committing misconduct during the pandemic distance learning. The major outcome implies that addressing the issues of online assessment, cheating, and plagiarism on multiple levels is necessary, including boosting student knowledge and ethics; overcoming the resistance of the conservative part of the participants in the educational process to educational innovations due to the relatively low level of their mastery of modern educational technologies; training teachers to detect cheating methods.

Keywords: E-learning, Remote assessment, COVID-19.

AVALIAÇÃO REMOTA EM INSTITUIÇÕES DE ENSINO SUPERIOR DA UCRANIA: Estudo de caso

RESUMO

Este estudo narra a implementação da avaliação remota durante a pandemia de COVID-19 na educação em instituições de ensino superior ucranianas, com base nas reflexões de 600 alunos e 150 educadores. Uma ampla gama de experiências de estudantes e docentes de instituições de ensino superior ucranianas foi agregada e analisada. Os dados foram coletados por meio da pesquisa Google Formas A investigação centra-se na experiência ucraniana na implementação de projetos de aprendizagem pandémica, soluções tecnológicas, sistemas de avaliação e medidas de integridade académica. O presente estudo também analisa as diversas intervenções tecnológicas de ensino, aprendizagem e avaliação introduzidas ou continuadas em instituições de ensino superior em todo o mundo, e como podem ter ajudado a reduzir a probabilidade dos alunos cometerem má conduta durante a pandemia de ensino à distância. O principal resultado implica ser necessário abordar as questões de avaliação online, trapaça e plágio em vários níveis, incluindo aumentar o conhecimento e a ética dos alunos; Superar a resistência da parte conservadora dos participantes do processo educacional às inovações educacionais devido ao nível relativamente baixai de domínio das tecnologias educacionais modernas; treinar professores para detetar métodos de trapaça..

Palavra-chave: E-learning, Avaluació a distància, COVID-19.

[1] Kherson Academy of Continuing Education.
[2] Bohdan Khmelnytsky National University of Cherkasy
[3] Cherkasy Institute of Fire Safety named after Chernobyl Heroes

Autor Correspondente: Yuliia Nenko
E-mail:julia18016@ukr.net
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1. INTRODUCTION

The global educational community faced a challenge in 2020 due to the spread of the coronary virus SARS-CoV-2. To counter the COVID-19 pandemic, educational institutions all over the world have been temporarily closed. The pandemic posed a huge challenge to the Ukrainian educational system as well. The academic year 2019/2020 was completed remotely.

The epidemiological situation has forced everyone without exception to adapt to new realities and master a special mode of education – emergency remote education. This practice is completely different from planned distance education, online learning, or different derivations (Bozkurt *et al*., 2020). The governments of most countries were not ready for such a large-scale pandemic; their practical measures were formed situationally. The lockdown forced the instructors and students overnight to put into practice fully remote learning and teaching. Developments and improvements have been made to maintain the continuity and quality of education.

The abrupt change of modality caused by the COVID-19 pandemic has complicated the learning processes not only in Ukraine but also in the world and significantly intensified the traditional problems for the local educational systems. Distance learning and new requirements for the educational process have become a challenge for the domestic education system. Until 2020, distance learning in Ukraine was not considered a mandatory, necessary form of education. Unlike many educational institutions in the world, most Ukrainian universities did not have experience of distance education; therefore, educators faced a difficult period of adaptation. Researchers noted the difficulty of its implementation due to insufficient resources and funding, imperfect teaching methods and techniques, lack of affordable and user-friendly software.

The pandemic affected the usual lifestyles of students and exacerbated a number of issues, including: lack of uninterrupted access to the Internet; risk of biased assessment; insufficient self-organization; irregular communication with the instructors; lack of adequate technological resources; lack of computer efficiency (Information-analytical Reference on the Results of the Survey on the Use of Distance Learning Technologies in Higher Education Institutions of Ukraine, 2020).

The teaching staff experience difficulties, namely, lack of live teacher-student contact; insufficient technical support of the educational process; poor information and communication technologies; risk of academic dishonesty; risk of biased assessment of students; shortage of well-designed online courses; use of e-courses of dubious quality due to their emergency development; and impossibility of full-fledged discussion (Information-analytical Reference on the Results of the Survey on the Use of Distance Learning Technologies in Higher Education Institutions of Ukraine, 2020). A significant challenge for instructors has been to engage students in online activities, assess student knowledge, and maintain academic integrity.

Therefore, the search for alternative solutions to support the learning design of the courses and remote assessment has become the main priority in the field of education. This is a new area for educational institutions, and it is gaining greater visibility with distance learning.

2. OBJECTIVES

The objectives of this research are as follows:

- Explore the reflection results of Ukrainian students and educators on the remote assessment during the pandemic learning.
- Identify the challenges of remote e-learning assessment during the COVID-19 crisis encountered by educators and learners and the approaches adopted to overcome

them.
- Understand the currently used platforms and applications that can assist in enhancing academic integrity and reinforcing education during pandemics.

3. TOPICALITY

In the scientific discourse, the issue of fully remote teaching and learning and remote assessment of students' academic achievements is insufficiently relevant and developed. The quarantine and pandemic factors have led to more active research on this problem, both on a theoretical and empirical level.

The findings of current research are relevant for entrants and their parents to understand the specifics of online learning in higher education and for teachers and school administration to adequately prepare future students for change so that it will not be a stressor for them while studying in higher education.

The data obtained in the study can serve as a basis for management decisions by the institution's administration, faculty members for appropriate course adjustments, content development, and technological applications.

4. METHODOLOGY

4.1. RESEARCH DESIGN

The research used a case study to describe a case in-depth in real-life comprehensively. In this study, the reflections of Ukrainian university students and educators on remote assessment during the COVID-19 pandemic were explored in-depth in Ukraine.

Researchers conducted this study during the two-month timeline of December 2021 and January 2022, which is the traditional period of final evaluation in Ukrainian higher education institutions. The researchers did not perform any interference. This work follows a quantitative research methodology, with an exploratory and descriptive character, to understand the phenomena under study. Four Ukrainian higher education institutions were the study population: Cherkasy Institute of Fire Safety named after Chornobyl Heroes, Bohdan Khmelnytsky National University of Cherkasy, Kherson Academy of Continuing Education and National University of Civil Defence of Ukraine.

4.2. DATA COLLECTION

The data was collected using a Google Forms questionnaire sent to the participants via email, Viber, and Messenger. Simple random sampling is applied by asking students and instructors from the four Ukrainian higher education institutions to complete an online questionnaire. The latter has been developed by the researchers to elicit faculty members' and students' attitudes towards assessment in E-learning and the educational and technical challenges confronting them. The questionnaire was answered by 600 students and 150 instructors. Each respondent was assured of confidentiality and anonymity. All of the participants were informed that participation in the study was voluntary and that their responses would only be reported in aggregate. The questionnaire was sent during the occurrence of the COVID-19 pandemic.

The data was analyzed through several steps: scoring the questionnaire, finding the percentage, interpreting the data analysis, and stating the conclusion. For data analysis, the researchers utilized the statistical software IBM SPSS version 20.

4.3. RESEARCH SAMPLE

The target group in this paper was divided into two categories: students (600 people) and instructors (150 people) affiliated with these four higher education institutions, as illustrated in Table 1 and Table 2. These categories represent the main actors in the educational process. The sample of survey participants is representative of each educational institution.

Table 1. The research population (students) based on gender

HEI	Gender	N	Percentage	Total
Cherkasy Institute of Fire Safety named after Chornobyl Heroes	Male	154	77%	200
	Female	46	23%	
Bohdan Khmelnytsky National University of Cherkasy	Male	71	39.4%	180
	Female	109	60.6%	
Kherson Academy of Continuing Education	Male	22	27.5%	80
	Female	58	72.5%	
National University of Civil Defence of Ukraine	Male	93	66.4%	140
	Female	47	33.6%	

Table 2. The research population (educators) based on gender

HEI	Gender	N	Percentage	Total
Cherkasy Institute of Fire Safety named after Chornobyl Heroes	Male	32	76.2%	42
	Female	10	23.8%	
Bohdan Khmelnytsky National University of Cherkasy	Male	13	26%	50
	Female	37	74%	
Kherson Academy of Continuing Education	Male	13	34.2%	38
	Female	25	65.8%	
National University of Civil Defence of Ukraine	Male	14	70%	20
	Female	6	30%	

5. LITERATURE REVIEW

The COVID-19 pandemic forced higher education institutions to reimagine teaching, learning delivery, assessment, and accreditation (Idwan *et al*., 2021). The instructors promptly revised their course syllabus and made necessary adjustments to the course requirements and policies to address the hardships students were facing due to the direct and side effects of the pandemic. The adjustments included replacing exams with projects, rescheduling mid-term exam times, submission methods for exams and quizzes, and providing alternatives to situations in which students could not take online exams due to unstable internet connectivity or other technical or non-technical issues (Karimi *et al*., 2021).

The transition from traditional face-to-face education to distance education was significantly faster in countries with strong digital infrastructure (Al-Samiri, 2021). However, countries that have insufficient infrastructure and low penetration of internet coverage, appropriate content development and assessment, strategic direction and planning, did not provide institutional support and training for the instructors, have been unable to fully benefit from distance education with the emergence of the COVID-19 pandemic. For instance, students in Turkey, due to a lack of or limited internet connectivity, benefit mostly from written materials and course presentations in distance education. Virtual classroom participation and video programs that allow students to engage with the teacher are often neglected, as reported by Can (2020).

Teymori and Fardin (2020) prove that e-learning in institutions with little or non-existent technical and administrative assistance means teachers are struggling with the different obstacles throughout the delivery of their instructions on their own.

5.1. COURSE DESIGN & TECHNOLOGICAL SERVICES

The outbreak of COVID-19 has shown that despite numerous research, pedagogies, technological solutions, learning technologies, etc., we were not prepared to put into practice fully remote learning and teaching (Daniel, 2020). Therefore, the teachers' capacity to innovate in designing and gathering materials, learning methods, and selecting the appropriate applications in line with the material and procedures determines their success in conducting online learning (Rahayu & Wirza, 2020). During the pandemic learning educational space has become fully digital, including learning resources (Pappas & Giannakos, 2021). When traditional classroom pedagogies are transformed to digital and the content provided on e-learning platforms is not designed in a way that is suitable to the context, students are constrained (AlAteeq *et al*., 2020). Okereke *et al*. (2020) established that e-learning platforms limit the control of the instructors over their students who may log in but engage in other activities that are unrelated to learning.

Technology has long supported education, from learning management systems to proctoring and text-matching software to activity tools and gamification platforms (Meccawy *et al*., 2021). Numerous learning systems (e.g., Canvas, Blackboard, Moodle, Google Class, etc.) have been leveraged to "orchestrate course material, digital communication, assignments, and project work" (Pappas & Giannakos, 2021). Technological services like Word Clouds, Padlets, Kahoot, Flip Grids, etc. have been adopted to enhance the online learning experience and facilitate the presentation of assignments to students (e.g. to publish task requirements, the criteria to be used in assessment and the timings for submissions) and to track and record student progress (e.g. automatic time logging of activities and assignment submissions) (Meccawy *et al*., 2021).

A number of universities use the Blackboard App for teaching their online courses as it allows for interactive discussions to take place, and can be used as a typical "chalkboard" that one uses for on campus teaching.

For the quizzes, a real-time response system (i.e., Kahoot!) and regular learning management systems (i.e., Canvas, BlackBoard) were employed (Pappas & Giannakos, 2021), where students could take them at any time, before or during the course, online or offline, while informing the teacher about their understanding of fundamental concepts through the formative assessment. Gamifying quizzes can lead to increased student motivation, engagement, enjoyment, and concentration (Zainuddin *et al*., 2020, Pappas & Giannakos, 2021). Positive effects are connected to the increased social interactions that are nurtured by many technologies (e.g., Kahoot!) (Pappas & Giannakos, 2021).

When the "traditional" classroom pedagogies were transformed to digital, the typical lecture became either a prerecorded video lecture or a live webinar. In any case, after the live or pre-recorded video lecture, the students had a short period for interaction with the instructor (e.g., 20 min) to discuss some of the concepts, clarify potential questions, or engage in a digital learning activity (e.g., taking a quiz or solving an exercise) (Pappas & Giannakos, 2021). New tools such as Kaltura and Panopto allow teachers to produce, manage, publish, and analyze learning videos professionally with minimal effort (Arnold, 2019). Such tools allow users to create recordings from the computer in their classroom, upload and edit already recorded videos (Pappas & Giannakos, 2021).

E-portfolios, project work, story books, and dossier assessment are also widely employed in pandemic education (Khan *et al*., 2021; Pappas & Giannakos, 2021).

The literature review proves that researchers have not yet investigated or established clear best practices for transitioning courses rapidly from face-to-face to a fully remote format (Brophy *et al*., 2021). However, it is of vital importance that the technology chosen is simple, easy to use and does not require constant downloading or even account creation (Khan *et al*., 2021).

In the survey by Brophy *et al*. (2021) course design elements that facilitate easier transitions to emergency remote teaching due to the COVID-19 outbreak have been identified. They include clear instructions, flexibility, access to materials, having everything needed for the class in the system, regular feedback and reminders from instructors, teacher competence.

The scholars also suggest that while providing some asynchronous course options is important to ensure access for students with limited internet and technology resources at home and to provide synchronous learning opportunities to support students who benefit from the structure and social support offered by course meetings (Brophy *et al*., 2021).

Some of the elements that were most strongly associated with a harder transition included requiring more work online, changing assignments as a result of the transition, and lack of clarity about how to find and submit assignments (Brophy *et al*., 2021).

However, the specific types of engagement in the course (discussion boards, online lectures, learning modules, and collaborative assignments) had much lower effect sizes and were less influential in determining whether the transition to remote teaching was smooth. (Brophy *et al*., 2021).

5.2. ASSESSMENT DESIGN & TECHNIQUES

Moving assessment from a physical classroom environment to an online one is challenging (Meccawy *et al*., 2021). Instructors were having difficulty evaluating their students in e-learning contexts due to inconsistencies between the learning and teaching strategies; unethical practices by the students and restrictions in terms of the evaluation methods that are available for instructors (Suryaman *et al*., 2020).

The assessment of the courses was typically done through exams, with some exceptions (e.g., full project-based

courses or portfolio assessment courses). This has also been partially transformed during the pandemic, with certain advantages and disadvantages, such as changing to online exams, shifting the grading protocols from point-based to pass/fail, or adopting live proctoring techniques.

With assessments under the spotlight, the new challenge faced by educators was the integrity of assessments, especially for students not physically proctored by invigilators (Gamage *et al*., 2020). Doubts were raised about the assessment and evaluation techniques as they should be revised to fit the online mode, as it is difficult to monitor to prevent cheating, and the labs and practical courses are difficult to deliver and assess online (Sahu, 2020). Despite the proper policies and measures (i.e., academic integrity), this transition has resulted in making cheating easier, with both students and teachers perceiving cheating to be significantly easier with e-exams and especially with the use of third devices (Chirumamilla *et al*., 2020).

Academics who are accustomed to traditional paper-based procedures have been compelled to embrace online tools and approaches. This was an issue by itself since most academics were not adequately instructed to use online tools for evaluations and to minimize the risk of academic dishonesty.

As reported by Al-Hunaiyyan, Alhajri and Al-Sharha (2018), Suryaman *et al*., 2020, "the lack of appropriate technical and administrative tools will lead to a defect in the students' evaluation". This necessitates the need to find practical solutions that regulate the process of evaluating student performance and prevent unethical behaviors such as cheating on tests and scientific plagiarism (Alsahou *et al*., 2022).

In response to the pandemic in March 2020, different higher education organizations within the United Kingdom introduced the so-called "no detriment policies". Some simply finalized the results based on the available gradings. This created student complaints of discrepancies within grading, resulting in unfair advantages as well as disadvantages for some students (Khan *et al*., 2021)

The Ministry of Education in Saudi Arabia decided that all testing was going to be online and courses were to follow a more formative approach to assessment, with most grades awarded as coursework, projects, and short quizzes (Meccawy *et al*., 2021).

The distance learning format encourages and facilitates the continuous evaluation process, which changes the traditional paradigms of written tests. Many educators transformed their assessments into non-invigilated types of assessments (Khan *et al*., 2021). Some transformed assessments into multiple choice questions, short answer style structured questions using online tools, whilst others incorporated vivas, online presentations etc. (Khan *et al*., 2021) Since online and short-answer tests provide the opportunities for students to use common search engines to find the answers, academics were forced to think about questions that would require knowledge application (rather than knowledge reproduction) (Khan *et al*., 2021). Some universities provide a 24-hour period for students to complete the tests, so students have flexibility in taking the exam or test. This provides the potential for students to share questions and answers. using GroupMe, Discord, or similar communication apps. This compelled scholars to generate random questions from a pool of question banks.

Instructors at South African university implied Invigilator App as the proctoring software to invigilate assessments and used test settings on Blackboard that randomize answers and problems, forbid backtracking, limited duration, starting time frames, etc. They also offered penalties for late submission, rephrase and re-word questions taken from textbooks, refrain from using questions taken verbatim from publishers' websites, and offer different versions of the same task (Reddy *et al*., 2022).

One of the significant approaches adopted in universities is personalizing assessments for individual students. Assessments that are engaging and personalised are less likely to be plagiarised and often lead to a more authentic demonstration of students' capabilities (Khan *et al*., 2021). Therefore, it becomes necessary to utilize technology to foster active learning and when designing assessment tasks.

5.3. ACADEMIC DISHONESTY

Academic dishonesty is present in traditional classrooms, but when assessment is moved online, the problem becomes more complicated (Manteufel *et al*., 2020; Meccawy, 2021; Pappas & Giannakos, 2021). Online academic integrity is a major concern that universities must address due to the increased potential for cheating since the instructors have no control over students studying online. Scholastic dishonesty includes plagiarism, cheating in exams, getting someone else to do the work, copying solution manuals for homework assignments; using phones, text, and apps to share answers; using phones to take images of exam questions, sending them to external tutoring services, and copying solutions received from the external tutoring services.

This is echoed by Meccawy, Meccawy and Alsobhi (2021) exploring student and faculty perceptions of online assessment practices at King Abdulaziz University (Saudi Arabia) during the COVID-19 pandemic. The study revealed that among the many challenges faced by faculty, cheating was by far the most severe. Most educators felt that it was due to a lack of proper invigilation, which caused grade inflation and did not reflect student performance.

While some of the department faculty members have identified such cheating and have penalized students who have copied solutions, a large cohort of instructors are not aware of how to deal with plagiarized work in the sense of how to score it or prevent it from happening.

When commenting on cheating, some faculty criticized the lack of security measures due to cultural or bureaucratic issues that prevented them from using cameras in assessment, especially to verify student identity. They also expressed the need for better plagiarism detection tools (Meccawy *et al*., 2021). In addition, some faculty expressed the need for more training on online assessment and cheating prevention measures, as well as flexibility regarding grade changes. "[D]espite the availability of anti-cheating software and plagiarism tools, not all instructors are adequately trained to apply them" (Al-Samiri, 2021, p.152). Educators wanted the power to award grades for attendance and virtual classroom participation.

In response to the growing concerns related to academic integrity, many universities decided to use Blackboard as a mechanism to deliver non-proctored exams. The exams consisted of quantitative problems that were randomized. Before the exams, a special live session was conducted to review the policies and procedures for taking the exams (Karimi *et al*., 2021).

When comparing traditional and online assessments by means of Blackboard, most educators report the convenience of online assessments' autocorrection feature, although many instructors feel online assessments are not suited to practical or sill-based subjects. They also believed that online and traditional assessment differed in quality and method, with 46.4% preferring traditional assessment methods (Meccawy *et al*., 2021).

Several Portuguese higher education institutions have adopted proprietary and open-source solutions such as ProctorExam, Exam.net, TestWe, and Respondus. These tools allow integration with e-learning management platforms and offer several mechanisms to verify student identity and environment. Furthermore, they offer other features such as suspicious behavior recording and detection, screen blocking, keyboard shortcuts, screen sharing, and 360° smartphone vision. However, despite all these features, none of these solutions is perfect and unequivocally prevents academic fraud (Almeida & Monteiro, 2021).

The University of Texas at San Antonio (USA) exploited WileyPlus assignments that use randomized parameters in problem statements such that the correct numerical answers are not the same for all students, and they can differ from the numerical answers presented in the textbook solution manual. According to Karimi, Manteufel and Herbert (2021), the advantages of these types of assignments are that the assignments are graded automatically, students get immediate feedback on their solutions, and due to randomization, students have to put extra effort

into solving these problems instead of simply copying from a solution manual. The instructor can set the system in such a way to allow students multiple attempts, often with a minimal grade penalty for multiple attempts. This provides an additional opportunity for students to learn the course material. The hand-written solutions are not graded for correctness but are graded for originality, clarity, organization, and completeness (Jones, 2008).

A student from the College of Basic Education (Kuwait) highlighted that the best way is to use the video option to mentor students' behavior during the test. Some students can easily cheat on online tests because the college does not use "lock down browser programs", Alsahou, Abbas and Alfayly (2022) reported.

Faculty and administration should eliminate or reduce opportunities for students to cheat by designing meaningful instruments and assignments and using robust techniques to assess students' knowledge rather than information recall, when appropriate (Meccawy *et al*., 2021).

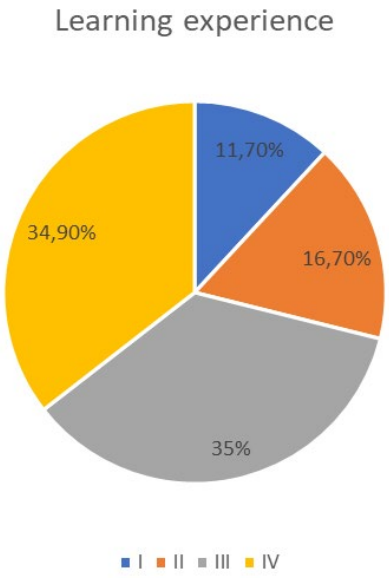
The issue of academic integrity and verification becomes even more important during the examination or when the assessment is connected with the final grade of the student. The strategies mentioned in the literature is a good starting point and can be combined (Pappas & Giannakos, 2021).

6. FINDINGS

6.1. OVERALL ONLINE EXPERIENCE

As illustrated in Figure 1, most participants of the current study are III- and IV-year students (more than 66%), and they do not have prior experience of remote education. 28.4% are I-and II-year students, and they studied remotely at school during the COVID quarantine. Therefore, they did not feel much change. Other students (5%) participated in different short-term online courses. Most students that were familiar with remote education specifics indicated they spent some time solving organizational and technical issues (password recovery, installation or repair of appropriate equipment, software at home, etc.).

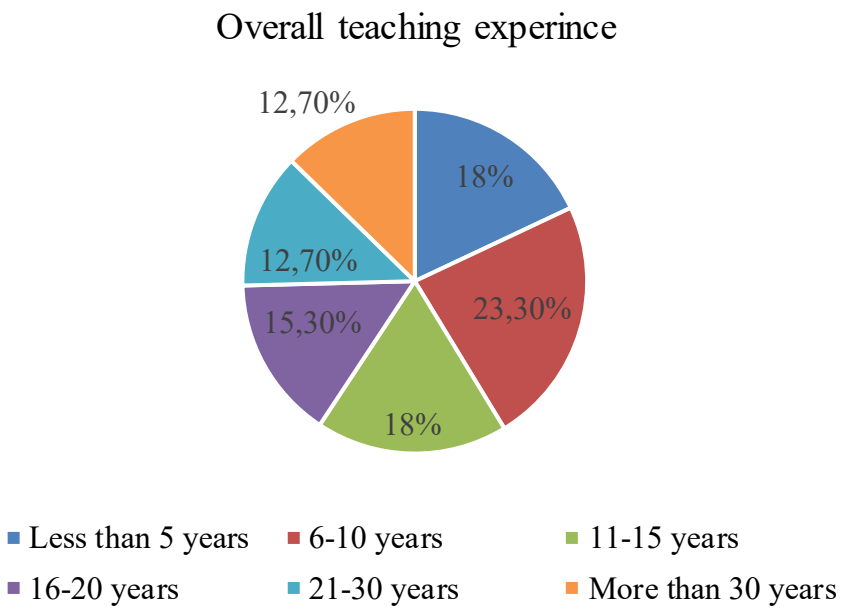
Figure 1. Students' information according to the academic year



More than 40% of teachers have significant pedagogical experience (over 15 years), as illustrated in Figure 2. Nevertheless, 85% of them have never practiced online teaching before to the outbreak of the pandemic. The vast majority of teachers have basic computer skills, and none of the respondents had previously worked with Google Classroom, Moodle, Zoom, or other software programs.

Most educators (80%) did not receive any prior training or technical support from their institutions. 97% of teachers use their personal computers or laptops to teach online, since they are not provided by their employers.

Figure 2. Teaching experience



In general, the surveyed participants, both educators and students, indicate that the abrupt shift to remote learning was perceived as stressful by many of them. While most respondents have already successfully adapted to the on-line learning mode and do not have any special signs of stress, psychological tension, or emotional burnout, some of them experience psychological hardships while learning or teaching remotely (6.7% of students and 19.3% of instructors). 10% of students fail to comprehend certain subjects or dislike a particular educator's teaching style.

As for the major difficulties in remote education, the students' answers were divided into groups:

- related to poor internet network (up to 41%); problems with the educational platform, lack of or insufficient computer devices (25%); utter lack of technical support from the educational institution (16.7%);

- inconsistent communication with teachers and lack of clear instructions (13%); computer illiteracy of the teaching staff and poor quality of the on-learning materials (13.3%);

- increased time for preparation (26.7%); increased workload (25%); low motivation to study (23.3%); psychological hardships (15%).

Only 2.5% of students did not feel any restrictions. Most students (65%) find studying at a university more convenient than at home, claiming the lack of direct communication with the teacher is the reason.

6.2. E-LEARNING

The advent of personal computers, networks, and web browsers contributed to the migration of education to the Internet. The most common tools and platforms used in distance learning are Google Classroom, Zoom, Moodle, and Teams, although teachers are not limited by the administration in their choice of additional platforms for online education, services, and Internet resources. This set of programs is standard in Ukraine but is still not assessed by students as very effective and without problems. Each of the learning management systems performs well with the main task, namely video communication, but still not 100%.

The results of the survey show that the use of non-standardized, non-uniform educational content complicates access to information and the perception of educational material, as reported by 52% of the students. On the other hand, students demand diversification of teaching methods and the use of different pedagogical applications (60.6% of respondents). Students do not want to follow "a single style of teaching that is often based on indoctrination" (Alsahou *et al*., 2022).

Most participants in the survey indicated that their course offerings were of a continuous nature. 92% of the educators adhere to the dates and times of the discipline, with certain agreements at another agreed time.

The instructors are using the online synchronous modality, where virtual lectures are given at regularly scheduled class times and online assessment is scheduled within a 24-hour window to take the exam, so students have flexibility.

When asked which format would be most effective for a fully online course, 18% of participants indicated that they would prefer a fully asynchronous course with no set meeting times. 27.2% would prefer a partially synchronous class in which students would do some work on their own and would also meet with their entire class online during the normal class time. The results of this study suggest that most students (54.8%) are open to taking online courses in a fully synchronous mode to benefit from course meetings and virtual interactivity.

With regard to the equipment used by students, we can assume that most of them use several gadgets. The majority use smartphones for studying (70%), laptops (50%), tablets (9%), and desktop computers (18%).

Webcams were used by 88% of staff and by 65% of students, which made verifying of student identities harder.

6.3. ASSESSMENT

An integral part of the educational process is the verification and control of academic achievements. Ever since the onset of the COVID-19 pandemic, most staff at Ukrainian universities (84%) have opted for the mixed mode of assessments, both continuous for the whole year and an examination type of assessment. Most Ukrainian institutional assessment policies and procedures have been reluctant to move away from traditional examination-type assessments and practice oral interviews as the final assessment method, as reported by 81.7% of students.

62.7% of instructors find assessment in a virtual learning environment complicated, mainly due to the technical limitations of eye contact and incompliance with principles of integrity by the students (the test can be performed by another person, there is a possibility of write-off, etc.).

Apart from a summative examination at the end, most educators transformed their regular assessments to non-invigilated types of assessments: written assignments (with their subsequent sending to the teacher) (85%), projects and/or personalized assessments for the individual students (50%). Providing large amounts

of paper-based homework presents a time and quality issue for the instructors. The time issue has to do with the instructor having enough time to grade the assignments and return them to the students in a timely fashion. The quality issue has to do with the level of detail that the instructor can go into when writing comments on the students' work (Cutshall *et al*., 2012). Therefore, web-based homework is a good way to provide students with a way to receive immediate feedback.

Almost 32% of assessments implied multiple-choice questions or short-answer style structured questions. Educators use testing on remote platforms (eg. Moodle) and online services (Master Test, LearningApps, Online Test Pad, ClassMarker, Classroom, Quizizz, Kahoot! etc.) to ensure rapid, objective, valid and reliable evaluation.

On the other hand, experience and competence of the teacher within a certain discipline does not necessarily mean that skillful creation of quality tests. A few instructors do not use the web but rather assign paper and pencil homework, collect it for check-in only, and review solutions in class. However, these methodologies cause severe challenges in upholding academic integrity. Given the option to submit the task either in a Word file or on paper, students overwhelmingly preferred a Word file (73.3%). The remaining respondents (26.7%) indicated they would rather submit exercises on paper, which makes them difficult to check for plagiarism.

When provided with non-graded tasks, students rarely work through a sufficient number of tasks. Some instructors (32%) establish attendance and participation scores to encourage further interaction.

It is critical to build a quality system of pedagogical interaction between participants in the educational process, i.e., to provide the best possible means of communication in the context of forced distance learning.

The students claim they lack direct interaction with educators (69.3%). The most common teacher-student communication channels outside the classroom were private messages via Viber, Whatsapp, and Telegram or e-mail letters (as indicated by 61.7%); group consultations (38.3%); and individual consultations (31.7%). Live communication via Zoom, Skype, or similar video conferencing tools was used with less intensity (5%). Although students have the opportunity to communicate with the teacher through messengers, live communication is a better alternative, as reported by 69.3% of students. Unfortunately, the absence of teacher-student interaction is indicated by 5.1%. We agree with Teymori and Fardin (2020) that students may feel discouraged from using the e-learning platform whenever they feel that their learning is not spontaneously supported by the instructors who are available to answer their questions and clarify concepts that they are teaching.

60% of respondents claim to have access to an electronic gradebook to keep track of their learning achievements. While most students can track their learning results in Google Classroom, many still have to ask a teacher personally. Concordially, 18.7% of respondents feel dissatisfied with the overall evaluation process. 23.3% say the evaluation process differs from teacher to teacher. The rest, 65%, are generally satisfied.

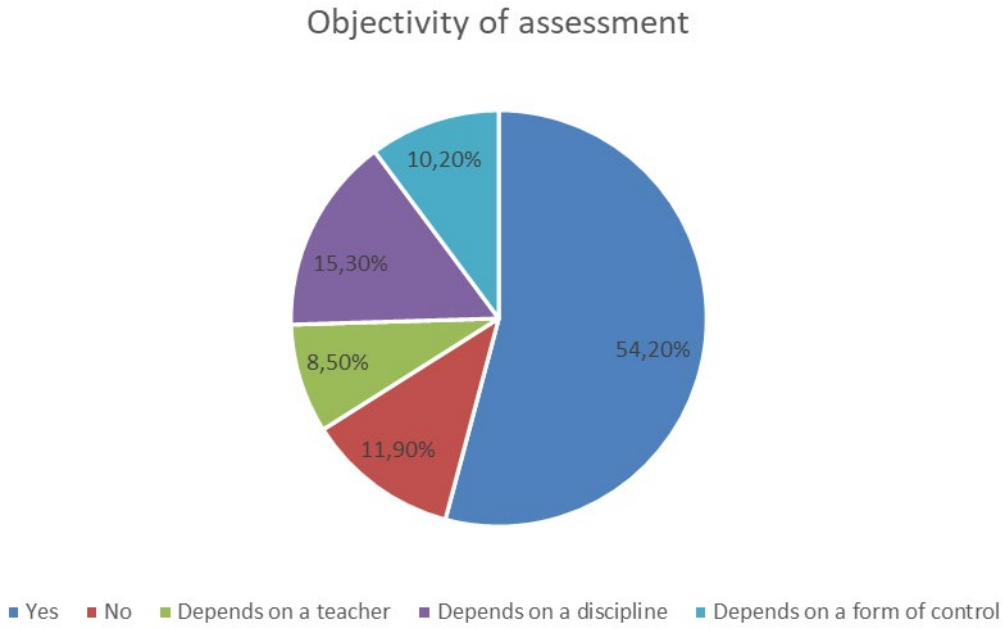
Although 65% of the surveyed receive some written or oral comments on their work, 33.3% say not all the educators comment on the given marks, and 1.7% of students complain that they do not receive any comments or explanations from teachers.

The surveyed students confirm that merely 12% of educators publish a weekly announcement to provide an overview of next week's topic or the results of the previous week's work or both. 32% regularly answer questions posted on the online forum or those sent by e-mail.

8% publish short videos explaining the mistakes of the group on the topic or task. 34% hold online discussions with students. 64% timely evaluate and return student work.

The students' opinion on the objectivity of evaluation in their educational institutions is presented in picture 3.

Figure 3. Students' perceptions on the objectivity of online assessment



When asked about their perception of the best assessment solution during the pandemic, students mentioned they expected their educator to adopt "a more cooperative assessment approach" during the pandemic and make things "easy" for them due to the lockdown. Some students believed that they deserved the final grade without submitting any work or taking a final exam due to the novelty of the learning environment.

6.4. CHEATING, OR ACADEMIC DISHONESTY

When asked about steps taken to eliminate dishonesty, instructors name reminding students about the importance of honesty and integrity policies (30%) and creating new questions that do not have solutions on Google (44.7%).

Both teachers (80%) and students (68%) report having learned about student honor codes and teacher's codes of ethics or their analogues in their educational institutions. However, the availability of these documents does not yet indicate their quality or effectiveness. That is, for some institutions that have a code of honor, this concept is perceived as a set of general phrases that the student reads only once upon admission (if read), in order to successfully forget it during the study. This conclusion is supported by the fact that, according to the results of content analysis, liability for violations is not spelled out in all documents.

In general, the results of content analysis showed that the existing codes of honor or their analogues often pay more attention to general principles than to norms on the independence of tasks, and very few such documents contain principles of respect for copyright.

Avoiding fraud in the assessment process is a central concern in most educational institutions. However, the study found that not every university has clearly defined procedures to combat plagiarism. In fact, plagiarism testing is mentioned in passing and links to services are provided for general reference rather than for guidance. Even full-fledged anti-plagiarism provisions are largely limited to indicating who is responsible for the inspection or who appoints the person responsible for the plagiarism inspection.

20% of students claim they do not cheat due to the limited time to complete the tasks. Almost 17% claim they have neither the technical possibility nor the desire to cheat. 63% of students admit engaging in some form of misconduct personally or confirm that their groupmates are regularly cheating. When citing reasons for cheating

online, students provided explanations, including strict time limits, worry about grades, the impossibility of being controlled by a teacher, which created an ease of cheating, the availability of answers online, etc.

Ignorance of the requirements and rules of citation, lack of skills in writing a scientific text, insecurity, and inability to properly organize time are the main causes of plagiarism, according to the respondents. It should be noted that 80% have never heard of any punishment for a violation of academic integrity. Most students claim that their institutions' unenforced policies are one reason for academic dishonesty.

Meanwhile, the majority of teachers (89%) admit the problem of academic integrity in Ukraine. The most common plagiarism prevention measures are informational work with students. Practical measures to reduce plagiarism are mentioned much less often. Most instructors mentioned acquaintance of students with rules of reference list composing; supervisors' conversations with students; explanation to students during classes of the inadmissibility of borrowing other people's results; plagiarism check; formulation of tasks in a form that makes it impossible to find a ready-made answer on the Internet; replacement of one large task from the course with several smaller ones etc.

Of the 150 teachers who claimed that plagiarism testing was practiced at their institution, 59 respondents said they did not know the nuances of plagiarism checking. Among those familiar with the details of the procedure, 48 (35% of the total number of respondents) use automatic plagiarism testing programs; 34 (24.6%) use manual testing (through search resources); and another 38 (27,5%) combine these methods.

Teachers note that a special commission on plagiarism is responsible for written work (course, diploma). Individual written works of students are checked for plagiarism by individual teachers (each teacher determines whether to check the students' work for plagiarism). Some teachers believe that this function should be performed by the department of quality assurance of educational activities or its analogue. Among the "other" answers were the information and technical department, library staff. The practice of checking for plagiarism of smaller works (from intermediate control tasks to the first year course final work) is not very common in universities. Perhaps this perception should be changed, because the students feel safe due to lack of control over plagiarism in ordinary works.

Regarding ways to deal with cheating on exams and assessments, educators state they need more flexibility concerning assessment methods. An attempt to solve this problem is to develop software that provides visual observation, blocks computer programs and parallel opening of Internet pages, as well as responds to the collapse of the exam dialog box during the control activities (test, exam, etc.).

On the other hand, to ensure the objectivity of the final assessment (to avoid the possibility of writing off and plagiarism in written works), it is not enough to carry it out synchronously. It is advisable to use tests that contain tasks not for the reproduction of educational information but for the application of acquired knowledge (practice-oriented tasks). Online testing should be conducted using a randomization function and limiting the time allotted for each task or test in general.

The degree of controllability in the evaluation process should be regulated by its direction. Thus, formative assessment involves providing feedback, testing, and understanding of the student's own learning achievements and opportunities for improvement. In this case, there is no need for strict control and to synchronize the evaluation process remotely.

In the context of distance learning, the use of innovative assessment methods is effective: project-based learning, problem solving, creation of posters, e-portfolios, research and practice-oriented tasks. All types of work require the support of teachers and the involvement of classmates (as partners or experts) and should be implemented in stages with regular feedback from the beginning to the end of the work on the task.

7. CONCLUSIONS

It is important for policy makers, educators, students, and other stakeholders to know how the education system is performing and whether the learning outcomes of students are improving over time. Due to the emergency move to online teaching and learning, faculty members and students face an increased workload since they need to work with the new systems and routines. This paper discussed practices and technologies for responding effectively to current circumstances. When designing courses for emergency remote contexts in the future, the items analyzed in the research can be used as a checklist to remind instructors to be intentional about including structural elements that facilitate an easier remote transition for students. Additionally, these items might also provide a useful starting point for developing measures for online instructor clarity. Furthermore, the findings of the present study underscore the importance of instructor communication behaviors and highlight the value that instructional communication scholars can bring to conversations about how to effectively transition courses to emergency remote teaching when the need arises.

The systematized suggestions and comments by the students highlight the need for educators to diversify learning technologies through videos, modern learning platforms, and media sources. Opinions are expressed about the desire for greater organization and clarity in conducting classes, consultations, meetings, and other options for communicating with students, since many live in rural areas and lack uninterrupted access to the Internet.

The same applies to clear instructions on how to perform various forms of independent work. Students demand less handwriting and more feedback. students prefer to receive assignments with corrected errors and comments on how to improve the work done (most teachers do this and students like this practice).

Technical improvement of the online testing formats and official educational platforms for the uninterrupted learning of students is needed.

Final grades and continuous assessment are a must, as they allow students to evaluate their learning outcomes. It is important when issuing final grades remotely that students should be familiar with clear evaluation criteria, grades should be posted on a single web resource (such as an online spreadsheet), and students should have access to this information.

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