

Academic Lecturers Towards the Students' Examining. Similarities and Differences of Stationary and Remote Exams in the Pandemic Era

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Abstract—The article concerns the opinion on stationary and remote examinations carried out during a pandemic, perceived from the perspective of examiners. The aim of the study was to find out about the perspective of academic teachers on remote examination at The Maria Grzegorzewska University and to compare it with the traditional, stationary exams. The subject of the research were, inter alia, the forms of checking knowledge and skills used by lecturers, the motivations driving their choice, problems arising during the exams, as well as the way of taking into account the special needs of the examinees. The research used the method of diagnostic survey. The obtained results indicate that, according to the lecturers, the students' independence during remote exams is smaller and the intensity of using unauthorized help by them is greater. Remote exams generate more problems - technical and related to the dishonesty of students. Lecturers hardly recognize and take into account the special educational needs of students during remote exams.

Keywords—crisis remote education; higher education, distance teaching; distance learning; emergency e-learning; students; lecturers; exams; assessment; COVID-19; SARS-CoV-2

I. INTRODUCTION

THE exam, which tests the student's knowledge, is an event summarizing a certain stage of learning a given subject. In the case of a stationary course within the walls of the university, it can even be a solemn moment, because it has its own traditional rules. Attempts to streamline the examination process and transfer it to the Internet began before the outbreak of the coronavirus pandemic [1-3], but it was only this pandemic that forced the acceleration of the development of remote education and knowledge checking processes [4].

Remote exams are less time-consuming to prepare, conduct and check, including the publishing of results among students, and also enable efficient conduct of the exam for a large group of students. They allow to generate an automatic assessment, which is the result of the operation of the IT system [5]. Remote examinations are profitable, provided that students have access to computers and efficiently use the software [6, 7], while teachers have IT competences and readiness to adapt the form of the examination to the specifics of the subject [8].

However, teachers do not like to change their habits related

to the preparation and conduct of exams, so in the case of switching to remote exams, they expect support from their institution, including access to good, reliable software [9]. They should have access to training, access to easy-to-use but highly functional examination systems that allow for easy preparation of exercises and exams, based on the existing and previously used authentication systems [10]. The system should allow for immediate feedback to students, which shortens the time that teachers have to devote to the evaluation of works - i.e. an automatic grading system that facilitates the checking of works in large groups [5].

The remote examination gives room for many cases of abuse on the part of students, who may take unfairly approaching exams, not only to obtain a better grade but also to reduce the level of stress raised by fear of technical difficulties [11]. Depending on the sources, 20% of students admit that they cheat during exams [12], and only around 70% say they are honest [13]. Among the various forms of student dishonesty are those that affect who take the exam - impersonating someone, collaborating with other students, using resources during the closed-book exam, and copying content from the Internet [14, 15]. One way to combat cheating during the exam is to pool questions and assign them to students randomly [14]. It is also recommended to create databases with questions of the same degree of difficulty to ensure the reliability of the method of checking knowledge [16].

Examples of institutional measures to prevent student dishonesty include codes of honor and the implementation of a policy for student integrity, which includes, among other things, clearly defining the rules and defining what academic fraud is, reporting misconduct by other students, as well as authorization, i.e. a declaration of the authenticity of the work [14, 15]. Another method is the use of proctoring measures. In the case of stationary exams, these include observing students while taking exams, and in the case of remote exams, they may consist in implementing appropriate software and turning on the camera during the exams [14]. An application that analyzes student behavior during exams was tested in order to detect fraud [17]. It has been found that activities related to the observation of students during examinations, combined with the

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implementation of the honor code, reduce the severity of cheating by students [18]. Perhaps it is necessary to consider departing from the common methods of checking knowledge and implementing a method consisting in observing the behavior and use of knowledge by the student in a simulated situation, close to the real event [19]. Unfortunately, this solution is not universal.

The issue of examining presented from the perspective of academic teachers is the subject of the considerations presented in this article.

II. METHOD

The aim of the study was to find out the opinions of academic teachers about the exams conducted in the stationary and remote mode. The subject of the research was the forms of checking knowledge used by lecturers, the motivations driving their choice, problems occurring during the examination in two modes, and the method of conducting examinations with students with special educational needs.

The following research questions were formulated: What are the opinions of academic teachers about conducting exams in stationary and remote mode? What differences do the surveyed teachers perceive in two examination modes in terms of workload, selection of forms of checking knowledge, preventing cheating, adapting exams to the special educational needs of students, and the level of stress and independence of students?

The diagnostic survey method was used. A questionnaire was prepared, which was sent by e-mail to all teachers of The Maria Grzegorzewska University. The survey consisted of six closed and seven open questions. The questions related only to stationary or remote examinations. They were not differentiated as to whether they were examinations verifying knowledge from subjects conducted in the form of lectures, exercises or seminars or whether they were diploma examinations. Responses were collected using the Google Forms. The data was collected in the period from June 15 to July 15, 2021. The statistical analysis of the research results was carried out in the IBM SPSS Statistics 26 program. The analysis of respondents' statements and their categorization was carried out by two competent judges.

III. RESULTS

In the survey addressed to academic teachers 36 people took part, which constitutes 9.9% of the employed. The youngest respondent was 31 years old and the oldest 90 ($M = 46$, $Me = 42.5$, $Mo = 46$). Most of the respondents were women (30 people, 83.3%), and a minority were men (6 people, 16.7%). This is the effect of feminizing pedagogical universities. Most of the respondents had a PhD degree (27 people, 75%), 6 people (16.7%) had a master's degree, and 3 people (8.3%) had a postdoctoral degree. The small number of people who took part in the study may be conditioned by the fact that individual subjects at the university have different methods of verifying the learning outcomes: tests during the semester, quizzes and exams. Only those lecturers who led subjects ending with an exam participated in the study.

The lecturers were asked to indicate which elements of the

examination are more visible in the case of stationary examination (1) and which in the case of remote examination (5). The lecturers assessed 11 elements, i.e. workload in preparing, conducting and checking the exam, workload in informing students about the results and checking the independence of students' work, the quality of grades obtained by students, students' independence during the exam, the level of stress of students during the exam, the frequency of using unauthorized help by exam-takers, the effectiveness of examiners' methods of controlling the use of unauthorized help by exam-takers and the readiness of the examiner to help the student during the exam.

Concerning most of the above-mentioned elements, teachers believe that their intensity is similar in the case of both examination modes. The exception is the assessment of students' independence during exams, which is higher in the stationary mode, and the dishonesty of students - higher in the remote mode.

TABLE I
DESCRIPTIVE STATISTICS
OF THE ASSESSMENT OF EXAM ELEMENTS

	M	Min	Max	Me	Mo	Ske	K
Workload to prepare the exam	3,22	1	5	3	3	-0,32	0,23
Workload during the exam	2,86	1	5	3	3	-0,32	0,07
Workload during checking the exam	2,56	1	5	3	3	0,11	-0,21
Workload for informing students of the results	2,72	1	5	3	3	-0,47	1,07
Workload for the control of students' work independence	3,25	1	5	3	3	-0,54	0,41
Grades obtained by students	3,44	1	5	3	3	0,02	1,55
Students' independence during the exam	2,14	1	3	2	2	-0,24	-1,20
Stress level of students during exams	2,67	1	5	3	3	-0,17	-0,58
Frequency of using unauthorized help by test takers	3,69	2	5	4	4	-0,37	-0,41
Effectiveness of examiners' methods to control the use of unauthorized assistance by exam-takers	2,42	1	5	3	3	0,16	-0,46
Readiness to help the student by the examiner during the exam	2,78	1	4	3	3	-0,84	1,35

A. Problems with the preparation and conducting of exams

The lecturers were asked to list the problems they perceive in relation to the examination process. The categories of responses are summarized in Table II.

In the case of stationary exams, 14 people do not notice any problems.

For 10 people, the difficulty is the time-consuming and labor-intensive connected with exams, detailed, inter alia, by checking papers (3 indications), providing information to students (2 indications). Individual indications also referred to: the duration of the oral exam, fatigue, additional working time.

TABLE II
PROBLEMS NOTED BY THE LECTURERS
DEPENDING ON THE FORM OF THE EXAM

Response Category	Number of responses	
	Stationary exams	Remote exams
No problems	14	5
Time-consuming and labor-intensive	10	2
Student attitudes	9	6
Cheating	6	21
Organizational difficulties	5	4
Difficulties with assessing student works	5	0
Maladjustment of the form of the exam	1	0
No answer	1	1
Technical problems	0	12

Lecturers also point to undesirable attitudes of students (9 people). These include: questioning the obtained grades, not preparing for exams, not taking notes, not reading literature, incorrectly placing answers on the sheets, illegible writing, reluctance to verify your own mistakes, coming to the exam despite being ill.

Another problem is cheating on exams (6 people). They indicate that students use cheat sheets from their smartphones and cheat by prompting each other.

The lecturers also notice organizational difficulties (5 indications) related to the need to supervise a large group, book a room, and place students in the room in a way, that will make it harder for them to cheat by prompting.

For some, the problem is the assessment of the works of students (5 people). This category includes: establishing evaluation criteria, including the evaluation of open-ended questions, the need to take into account the grade from exercises, no possibility to use descriptive evaluation, no possibility to comment on students' answers.

One person indicated the necessity to use a test which, although not optimal, allows quick and easy checking the knowledge of a large group. One person did not answer this question.

With regard to the remote mode examinations, 5 people did not see any problems.

For 21 people, cheating and swindling by students is a significant difficulty. This is illustrated by the example "A student reports that he did not have time to submit the exam within the prescribed period. After checking in the system, it turns out that he did not log in at all during the test." This reduces the trust in students, which can be seen in the statement: "Despite efforts to control students with cameras, etc., we cannot see some of the rooms where the test-takers are, so it cannot be 100 percent ruled out that they are not any unauthorized aids or bystanders out of the camera's reach." It happens that, as a consequence of a fraud, students receive higher grades. The teachers themselves try to prevent cheating, as can be seen from the description: "I know that students communicate with each other during exams using other communicators. This is a common situation. But good preparation of the content of the test questions, mixing them, the

use of several groups means that, contrary to fears, there are not only best grades in test exams."

Technical difficulties (12 responses) are also part of the remote examining process. In more detail, it was pointed out that the deadline for submitting answers was exceeded by students and that the application used for examinations has limited functionality.

Four lecturers recognize the organizational difficulties. In this respect, lecturers note that it is difficult to reliably examine large groups online (2 indications), that examining is more difficult, there is an extended communication time (one indication each). Three respondents notice the stress of students and lecturers. Two teachers indicate that such exams are labor-intensive and time-consuming. Six lecturers perceive undesirable attitudes of students: lack of preparation for exams, lower concentration, higher level of stress, generation of conflicts by them. One person did not answer this question.

B. Prevention of unauthorized assistance during the examination

The respondents were asked an open question on how to prevent the use of unauthorized aids during exams. The categories of teachers' responses are listed in Table III.

TABLE III
WAYS OF LECTURERS TO PREVENT CHEATING
DEPENDING ON THE FORM OF THE EXAM

Activity category	Number of responses	
	Stationary exams	Stationary exams
Organizational activities aimed at monitoring students	40	0
Appropriate test / task design	19	39
Technical activities aimed at monitoring students	0	9
Difficulty preventing cheating	0	8
Introducing and following the rules	5	0
Trust	1	2
Verification of students' answers on the Internet	0	2
No such experience	1	4

During the stationary exams, organizational measures taken by lecturers aimed at monitoring students and preventing cheating were important. The teachers mentioned 40 such activities, including observation of the group and guarding while walking around the room (15 indications), seating students at a distance from each other (7 indications), being present in the room (5), inviting other teachers to help with supervision (3 indications), forbidding to keep objects on the table and next to the bench (3 indications), organizing examinations in small groups (2 indications), choosing a large room (2 indications). There were also activities mentioned such as giving their own sheets to write exam on, choosing an oral exam and listening to what was happening in the room.

The second category of answers concerned the appropriate structure of tests and examination tasks (19 answers). These include: creating a version of the test (division into groups) (9

responses), formulating open questions and individualizing tasks (3 responses each), limiting the time to answer (2 responses). In addition, single teachers listed: problem-question formulation and random order of questions.

For 5 people it was important to introduce and consistently follow the rules of the exam, one person wrote that it was important to trust students and one that he did not have such experiences.

In conducting remote examinations, the most important activities were related to the appropriate structure of tests and tasks (39 responses). This category described activities such as controlling and limiting the duration of the exam (13 responses), introducing a random order of questions (7 responses), formulating problem questions (6 responses) and open questions (3 responses), individualization of tasks (3 tasks). Individuals indicated the interweaving of open and closed questions, mixing the order of answers in a test, creating different versions of tests, prohibiting the submission of tests after deadline (after other students had already submitted their answers), using the project method.

One of the respondents writes about his solutions as follows: "I try to reasonably limit the time of filling in questionnaires with open and closed questions so that the prepared student could answer, and the unprepared student did not have time to cheat. Besides, I try to formulate the wording of the questions (problem-wise) so that it is not easy to find the answer on the Internet. I also resigned from selecting the option regarding the automatic return of correct test answers after their submission by students (I publish the results only after the end of the exam)."

Instead of organizational activities, teachers made some technical improvements, which were aimed at monitoring students (9 responses), which included the obligation to turn on the camera (5 indications), the need to look directly at the camera (2 indications), turn on the microphone and observe the students (one indication each).

Eight teachers highlighted that cheating cannot be completely prevented, especially if students are proficient with modern technology. As one of the respondents writes about it, "we can control the time limit, rotate the order of questions and answers, but we also have to take into account potential technical and Internet access problems. The way is to ask open-ended questions, which, however, is only possible in small groups."

Four people wrote that they did not organize remote examinations and did not have experience in this field. They justifies it as follows: "I am not preventing, because you cannot ask students to turn on their cameras. The microphones must be muted so that the tapping of the keyboard is distracting."

For a small group of teachers, it was important to trust students and to introduce the habit of verifying students' answers on the Internet (two indications each).

C. Adaptation of exams to the special educational needs of students

Another open question concerned the adaptation of exams to the special educational needs (SEN) of students. A summary of the responses to this topic is provided in Table IV.

To support students with special educational needs, the

lecturers undertake several organizational activities (39 responses) during the stationary exams. These include extending the time of writing the exam (13 responses), changing the form of the exam (10 responses), introducing a different or additional exam date (5 responses), individual examining people with SEN (5 responses), choosing a different place to take the exam and using a different technical form (2 indications each). Individuals let students pass the oral exam and introduce the possibility of lip-reading.

TABLE IV
METHODS OF ADAPTING EXAMS
TO THE SPECIAL EDUCATIONAL NEEDS OF STUDENTS

Activity category	Number of responses	
	Stationary exams	Stationary exams
Organizational activities	39	24
Learning about special needs and adapting the exam to them	16	9
Activities related to the design of the exam	13	8
No such experience	5	9
Involvement of supporters	3	2
Introducing clear examination rules	3	0
No answer or not understanding the question	1	2

An important element is getting to know the students and adapting the exam to the needs of students (16 responses), e.g. helping students, ignoring spelling errors.

The activities related to the structure of the exam (13 people) are also important. This is achieved by adjusting the font size or using contrast printing (9 indications), adjusting the amount and type of material (3 indications), and adapting to a different language (1 indication).

Three people engage supporters (assistants, sign interpreter) and introduce and explain clear rules of examination and assessment. One person reported that they did not understand the question.

As an example of a detailed description of dealing with examinations in the stationary mode of students with special educational needs, it is worth quoting the following statement: "If the exam is written and the student is visually impaired - the test is written in bold and enlarged font. I test blind people orally. Hearing-impaired people with whom I have come into contact used either the written test or were able to help themselves with lip-reading during oral exam corrections."

When examining remotely, the most important are also organizational activities undertaken by lecturers (24 responses) to take into account the special educational needs of students. These include extending the time for answering (13 responses), introducing alternative forms of the exam (e.g. oral, work-based credit throughout the semester) (5 people), another date of exam (4 responses), additional inquiries, assistance with technical problems (one indication each).

Nine people try to understand the needs and adapt the exams to the special educational needs of students.

The very structure of the exam (8 people) is also important, including adjusting the font size (3 people), formulating different tasks (2 people), giving additional work to do,

adjusting the language, differentiating tasks (one indication each). Two people engage supporters (assistant, sign interpreter). One person did not answer this question, one wrote that they did not understand the question.

D. Other lecturers' comments

As part of the research, lecturers were also asked to write down other comments that they considered important. Among them, there are appeals to return to university; conducting online classes with stationary exams; introducing the possibility of using computers in stationary examinations; suggestions to introduce additional functions in MS Forms and unify the rules of conducting examinations for all examiners.

IV. DISCUSSION

High efficiency of distance education at the micro-level, including, inter alia, the easier access to education for students, a wider range of options for choosing an educational institution, as well as a lower cost compared to traditional education, it encourages its promotion and development even after the pandemic ends [20]. Students achieve high-quality learning outcomes [21]. It is also worth developing methods of remote knowledge checking, inherent in the educational process. The common experience in universities of changing the mode of examination from stationary to remote makes us compare these forms of checking the learning outcomes.

Statistical analysis of selected aspects of traditional and online examinations showed that teachers evaluate these modes of work with students in a similar way, although they believe that in the remote mode, students are less independent and more often use unauthorized help.

According to the surveyed teachers, remote exams generate more problems. They concern the use of unauthorized help by students and the technical difficulties that arise. Situations in which lecturers have proven dishonesty of students result in a loss of trust and focusing on actions implementing methods that will prevent this phenomenon. This is important both in the context of the verification of learning outcomes and concern for the fairness of the given grades.

It should be assumed that the method of preventing students from cheating preferred by academic teachers, analogous to the solutions adopted in other universities, by radically reducing the duration of the exam, and even the time allocated for individual answers, results from the belief that the student, faced with the choice of whether to spend time writing answers or to cheat, it will choose the honest way. In addition, teachers assume that the best students will answer all the questions during this time, and the average students will answer correctly enough to pass the exam [16].

On the other hand, technical problems occurring during remote examinations are a source of stress for both students and teachers. Particularly problematic are the requirements for submitting the exam on time, within the timeframe imposed by the teacher.

In administering exams, the time required to develop them is crucial, although online exams are considered to reduce the amount of work and time for teachers to prepare [5]. The presented research shows that the greatest disadvantage of the

stationary exams is the time and effort involved in preparing and conducting them. The attitudes of students are also problematic, related both to inaccuracies in writing the exam and being an expression of their thoughtlessness and claims. The respondents experience problems less frequently when conducting stationary exams.

As part of the forms of exams that may make cheating difficult, written assignments that refer to students' thoughts and experiences to solve the problem are mentioned, but these are forms that do not work well in large groups [16]. It is also advisable to use oral examinations [22]. The students themselves believe that preventing cheating in exams is helped by, among other things, introducing other forms of assessment and differentiating forms of examination [16]. The presented research revealed a significant readiness of teachers to prevent the use of unauthorized help by students, noticeable in both examination modes. Organizational activities, which do not take place during remotely administered exams, are dominant in the stationary examination process. During remote exams, the emphasis is on such a construction of tasks and tests and the use of software capabilities to prevent cheating (in particular time constraints and turning on the cameras).

With regard to remote exams, a larger group of teachers report helplessness in preventing cheating. The respondents did not indicate the existence of institutional solutions at the university aimed at increasing the culture of passing exams.

Special educational needs refer to the difficulties, deficits and disabilities of students, which during remote education should be the subject of more than usual diagnosis and support, due to the specificity of remote education tools [23]. During exams, SEN should be taken into account adequately to their specificity and the level of difficulty of the exam. Students with special educational needs need a correspondingly longer time, which teachers should take into account when planning exams and the time allocated to passing them [16]. Teachers undertake much more activities aimed at adapting exams to the special needs of students during stationary exams. The most important category of teachers' activity during stationary exams are organizational adjustments, as well as, although to a much lesser extent, learning about special educational needs and adequate activities as well as preparing the appropriate structure of the exam. The same categories, but less frequently, are mentioned for remote exams. The teachers' declarations pointing to the lack of experience in organizing and conducting exams for students with special educational needs are significant - there are slightly more of them in remote exams.

The respondents' declarations indicate that, on the one hand, they try to intensively prevent students' dishonesty, and on the other hand, they hardly recognize and take into account their special educational needs. This raises concerns that their method of verifying learning outcomes does not take into account the styles of thinking, information processing methods, or the students' atypical (though not qualifying as special) educational needs.

The obtained results include a small sample, as they were addressed only to those teachers who carried out the examinations in two modes: stationary and remote, thanks to which they could compare their experiences. Despite this

limitation, on their basis, it is possible to recommend the implementation of organizational improvements in the case of stationary exams and technical improvements in the case of remote ones.

In particular, it seems important to support institutions in the selection of highly functional software, enabling the creation of tests for a large group of students, automating the issuing of grades, but also allowing individual feedback and creating statistics that will allow tracking students' progress. It is also worth implementing the possibility for teachers to share questions developed and used in the course and exams. These questions can be available to the teaching team, easily searched in the database and commented on if they are not accurate. It is also advisable to include articles, drawings, video and audio materials with the content of the exam [5].

Due to the high level of stress associated with passing exams, both stationary and remote, it should be considered conducting mock exams that will familiarize students with the atmosphere of the stationary exam and will also allow to familiarize them with the online examination platform. In case of difficulties, such actions will contribute to the recognition of potential difficulties and will enable the earlier development of their solutions [24].

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