

Advice to the Executive Board
on
online examination and proctoring.

Adhoc advisory committee
Erasmus University Rotterdam

Final version, June 2, 2021

1. Preface

In the beginning of 2020 it became clear that, due to the Covid-pandemic, the educational processes at Erasmus University Rotterdam (EUR) could not be continued in the usual manner. Hence the Executive Board decided, after consultation with the deans, to transfer to online education and examination in order to keep the study delay of EUR-students to a minimum. To facilitate those forms of online examination for which some type of surveillance was needed the EUR contracted ProctorExam, a company specialized in providing software for proctoring during online examinations. Some schools used this tool for a substantial part of their examinations, while other schools transferred to other types of testing for which proctoring was not (or to limited extent) needed. In the autumn of 2020, several Examination Boards were informed that the proctoring devices in use could not prevent certain types of fraud via the screen of students. After consultation with ProctorExam it was decided to fight this form of potential fraud by requiring students to use a second camera providing sight on the computer screen of the student during online proctored examinations. The Executive Board decided in December 2020 to make the use of this additional camera compulsory from January 31 onwards for a period of three months, after which this type of proctored examinations would be evaluated. Based on this evaluation it should be decided how to proceed from June 2021 onwards.

From the very start of the use of the second camera the Executive Board received complaints by students as they felt that this second camera had a substantial negative influence on the stress they experienced during their examinations, while others also indicated that this second camera was experienced as quite intrusive on their privacy and had discriminatory effects. The Executive Board discussed this with the student representatives in the University Council. This discussion resulted in the installment of an advisory committee, that is asked to deliver around mid-May an advice to the Executive Board how to proceed with online examination from June 2021 onwards. The evaluation by CLI of the use of the second camera that was published on 28 April 2021 should be considered in its advice.

In this report the advice of this committee is formulated.

The committee was composed as follows:

- Frank van der Duijn Schouten (rector magnificus; chairman)
- Marjan Gorgievski-Duijvesteijn (staff member UC)
- Bram Heesen (student member UC)
- Manon de Jong (E&S)
- Jasper Klasen (student member UC)
- Luca Kriese (student member UC)
- Lucas Meijs (chairman EUR-Consultation Body of chairmen Examination Boards and chairman Examination Board RSM)
- Marieke Veenstra (CLI)
- Arjen Voogt (IT)
- Michel van der Wel (vice-dean education ESE)

Machteld Harmsen and Lobke van Steenbergem took minutes, while Hans van den Berg (chairman UC) attended some meetings of the committee as observer.

The setup of the rest of this report is as follows.

The committee considered the vision of the EUR with respect to cheating and plagiarism as leading in dealing with the new device of online proctored examination. Nonetheless, the committee also recognizes the impact online proctoring has on students. A fine line needs to be walked between privacy and practical issues and the perceived threat to diplomas. Consequently, this committee provides concrete solutions how to alleviate these issues within the boundaries of a two-camera setting. In Section 2 this vision on cheating and plagiarism and its implications are summarized and the various examination-related responsibilities of management bodies (Executive Board and School Management Teams), representative bodies (Faculty- and University Council and Programme Committees) and Examination Boards are addressed.

In Section 3 we comment on the conclusions of the CLI-evaluation of the use of the second camera during the trial period February-April 2021.

In Section 4 we present our views and recommendations on the future use of online examinations and online proctoring in the period ahead, for the short term (the remaining part of the present academic year) and for the longer term (next academic year and beyond).

2. Quality of examination

The quality of education and examination determines to high extent the reputation of the Erasmus University as institution of higher education and hence safeguarding its quality is in the interest of the academic community at large. According to article 7.10 (3) of the WHW, the Executive Board bears responsibility for the practical organization of examinations and tests, while, according to Article 7.12b (1a), the Examination Boards are responsible to guarantee their quality. Under normal circumstances representative bodies at school- and university level have no specific role to play as far as the quality of examinations is concerned. However, the stress associated with the procedures associated with online proctored examinations has an undeniable impact on the perceived well-being of students, which provides an argument for involvement of representative bodies. The same applies to privacy issues related with online proctored examinations.

Due to the limitations arising from the Covid-19 pandemic, the way in which teaching and examinations take place had to be reconsidered in the spring of 2020. The EUR has deliberately chosen to look for alternatives for usual forms of teaching and testing to keep study delay for its students to a minimum, while maintaining the quality up to usual standards. Examination Boards have been requested to take as leading principle to avoid, if possible, forms of testing with online examinations or to execute online testing without use of online proctoring, keeping the use of this tool as a last resort. The committee fully supports this principle. On the other hand, it is realized that the application of this leading principle has its limitations. For example, transferring to a different way of examination could result in a substantial increase of the workload of academic and support staff. The same applies to the suggestion to make use of the restricted facilities on campus for examinations by forming substantially smaller sized groups than usual.

The decision how a course is tested lays with the examiner, in close coordination with the Examination Board. To support the decision process of individual examiners how to reach conclusions about the most appropriate type of examination, several EUR-schools have developed

flow charts or decision trees in consultation with their Examination Board. The committee considers this as a useful tool and advises that all schools develop these type of flow charts and to make the use of them compulsory. Also, communication with students about the content and use of these flow charts is important. The committee holds the opinion that it would be beneficial when all schools have such a flowchart available and approved before the start of the new academic year. Support from Community of Learning and Innovation (CLI) in developing these flow charts and evaluating their use is advisable.

As these flow charts only describe the procedure how to reach conclusions about the form of examination and does not interfere with the actual responsibility of Examination Boards, the committee advises not to include these flow charts into the Regulations of the Examination Board. For the time being the committee advises to treat the flow charts as stand-alone documents and to subject them to advice or consent of representative bodies at school level (Faculty Councils and Programme Committees). In the course of next academic year, it can be considered whether an addendum to the OER is more appropriate and whether a university-wide flow chart is advisable.

An important quality characteristic of examination is that students are treated equally. This implies that when it is decided that a test is executed in different forms (e.g. on campus versus online) the tests should be organized in such a way that students are not substantially advantaged or disadvantaged in either form. This implies, amongst others, that Examination Boards must ensure that personal circumstances preventing students from taking an online proctored exam will be addressed, and adequate alternatives should be offered for these individual situations.

Although universities should always strive to operate under a Code of Conduct in which proctoring during examinations is not necessary at all, the actual experience reveals that this ideal situation will most likely never be met. As long as online proctoring turns out to be a necessary evil, it is useful to communicate which types of fraud online proctoring is intended to prevent, as it facilitates the judgement whether proctoring measures are appropriate and proportional. Hence, we also present in this section a summary of the general EUR-policy with respect to the role of online proctoring in fighting cheating and fraud (see also the EUR-brochure <https://www.eur.nl/en/media/85025>).

At present the Boards of Examination of the EUR take into account the occurrence of several types of fraud including:

- Identity fraud;
- Communication fraud;
- Fraud related to use of forbidden support material.

Proctoring is seen as a tool to prevent these (and only these) types of fraud. So, when online examinations take place, the use of online proctoring should be justified by its role in preventing one or more of these types of fraud. Once the type of examination is determined (using the flow charts mentioned above) the relevant types of potential fraud can be identified, and the acceptable tools of prevention can be chosen, both in case of on-campus as well as online examinations.

Of course, for the University Council always exists the opportunity to discuss with the Executive Board issues related to the practical organization of examination. While a large portion of responsibility may be shifted to the school level (e.g., when can/should examiners use online

proctoring), more general issues as to the availability of on-campus facilities for examination and what software tools to be used, are open for discussion between Executive Board and UC.

Finally, the committee would like to draw attention to a potential positive aspect of online proctored examinations that could be relevant for the future. The experience that has been acquired with online proctored examinations, under the pressure of the pandemic, could open new perspectives for higher accessibility of EUR-educational programs. For example, in case entrance to the Netherlands remains prohibited from certain parts of the world or in offering online master education in the private domain, online proctoring could make higher education more inclusive and offer students more opportunities. Of course, under all circumstances negative effects on students, such as excessive stress and discriminatory effects should be minimized through adequate measures. In case the decision is made to include online proctoring as integral part of examination for certain programs (such as e-masters) it is important to explicitly inform prospective students about this regulation. In this way, prospective students can make a carefully considered decision whether to enroll in such a program.

3. Evaluation report on the use of the second camera.

As part of its orientation the committee has studied the report of the evaluation on the use of the second camera during the trial period of three months, as executed by the Centre for Learning and Innovation (CLI) of the Erasmus University. This report provides insight in the experiences of EUR-students and EUR-staff with the use of online proctoring, and the use of the second camera in particular, during the period January-April 2021. The evaluation has been carried out mainly with respect to the technicalities both on the side of the examination organizations as well on the side of the students. This leads to the overall conclusion that, although a substantial number of problems occurred, the use of the second camera is doable. However, what is missing in the report is an evaluation of less tangible aspects, like the stress experienced by students due to the obligation to use the second camera and its impact on the student performance in the test. Hence the committee is of the opinion that the conclusion of the evaluation is incomplete as some relevant questions have not been asked. Also, the committee would have preferred to have more quantitative data on the number of online proctored examinations per school (not only percentages), on the number of students involved, on the percentage of students that experienced higher stress levels than under normal circumstances during examinations, on the number of fraud cases detected by the second camera, on the amount and nature of help inquiries (e.g. via the help chat) and on the number of students who have requested an on-campus examination to prevent online examination and online proctoring. Because the negative effects on students are not sufficiently addressed, the conclusion of the evaluation regarding the second camera could be overly positive. The committee advises the Executive Board to gather in the future the data mentioned above and take those into account when reviewing the EUR online proctoring policy.

4. How to proceed with on-line examination and on-line proctoring in the period ahead.

In this section we will distinguish between recommendations that can and should be implemented on the short term (particularly the remaining part of the present academic year) and recommendations that need more time for implementation (next academic year and beyond).

Recommendations for the short term (to be realized before June 15).

As the committee realizes that the development of flow charts to determine the form of examination needs time, the committee accepts that the present way in which the type of examination is determined (for some schools already using a kind of flow chart) can't be changed before the end of the present academic year. Nevertheless, the committee advises to implement the following changes in the online proctoring system on the short term, i.e. before June 15.

1. When it is decided to take an examination online with online proctoring, students should be informed on forehand about this choice and its motivation (with use of a flowchart, when available).
2. Reconsider, in consultation with ProctorExam, the positioning of the second camera, taking into account that (i) the room-scan can be restricted to that part of the room (in particular desk and the wall students face during the exam) from which fraud possibilities might occur (both communication fraud and the use of forbidden support material); (ii) the second camera is meant to prevent fraud via the computer screen of the student and should therefore only be used to detect such fraud; (iii) the advantage for students to use the second camera as back-up for a failing first camera should not be excluded.
3. There seems to be a disparity between the Examination Board's policy and how this policy is perceived by students. Hence Examination Boards are advised to more explicitly informing students about the possibility to ask for an alternative form of examination due to their personal circumstances. This particularly applies to the use of ear-scan which turns out to be problematic for certain religious groups.
4. When an exam is declared non-valid due to circumstances beyond the control of the student, the re-sit should be considered as the first try, in other words, the non-valid examination is not considered as a try.
5. Increase the capacity for on-campus/in town examination to the largest possible extent, also for the remaining part of this academic year.
6. To enable more on-campus or in town examinations, consider splitting examination groups in subgroups, if possible. Increase of workload for examiners should be considered in applying this possibility.
7. In case of proctored online examinations, students should be informed about the possibility to ask the Examination Boards for an alternative (like being offered the opportunity to take the exam on campus) due to personal circumstances, including increased experience of stress, improper ICT-facilities and religious or privacy considerations.

Recommendation for the midterm (to be realized before the start of the new academic year).

The seven short term recommendations mentioned above should also apply for the next academic year. In addition, the committee advises to bring more structure in the decision process about the type of examination to be used and to shift the responsibility for the use of the second camera in case of online proctored examination from the Executive Board to the Examination Board at school level. The reason for this change is that in the meantime the Examination Boards may have developed enough experience with the use of the second camera to weigh the advantages against the disadvantages, dependent on the set-up of the individual course and its examination. This shift of responsibility implies that Examination Boards and, therefore, schools can choose not to use a second camera in online proctoring or no online proctoring all together. Moreover, the committee advises to think of more permanent solutions for those students who will not be able to come to the

EUR-campus due to pandemic related developments in other parts of the world. This leads to the following additional recommendations to be realized for the midterm.

8. Every school should develop a flow chart to be used by individual examiners to reach a well-thought-out decision about the type of exam to be used for the course under consideration.
9. The use of this flow chart should be compulsory for individual examiners, at least for those cases in which online proctored examination is proposed.
10. This flowchart should be subject for advice or consent, as soon as possible by the representative bodies at school level (either Faculty Council or Programme Committees).
11. The responsibility for the decision which type of proctoring is applied for which examination (including the potential use of a second camera) remains with the Examination Board. This decision should take into account not only the quality of EUR diplomas, but also factors such as students' wellbeing, privacy and practical concerns.

Recommendation for the long term (to be realized during the course of the next academic year).

Even in case the 1,5 meter requirements will no longer be enforced in the near future and examination may more or less return to the usual set-up from before the start of the Covid-crisis, capacity constraints for on-campus examinations may remain in force (for example, limitations on maximal group size for examinations). This implies that schools should have a policy at hand to deal with this situation. Special attention should be given to those students who are not able to travel to Rotterdam due to remaining pandemic restrictions or personal circumstances. To mitigate these problems, we present the following additional recommendations.

12. The Executive Board should develop scenarios for the creation of examination capacity on campus or in town for the period ahead before the end of the academic year.
13. Consider agreements, at the level of EUR or individual EUR-schools, with trustworthy parties in other countries to organize proctored on-campus examination over there, under responsibility of the Examination Board of EUR-schools.