



proctorio

Theoretical & General Legal Framework

German based example for legal considerations

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1. Theoretical & general legal framing

Before considering the necessity of introducing proctoring solutions, among other things, from the perspective of higher education management, this paper must first discuss theoretically the comprehensive "digital education revolution" (Dräger & Müller-Eiselt, 2017) - particularly in relation to the field of action of higher education institutions. Dräger and Müller-Eiselt make it clear that the use of digital educational technologies is already widespread, particularly in Anglo-Saxon countries, and that proctoring is also used at universities (ibid., 2017).

The third pillar of the theoretical foundation needed to complete a consideration of the introduction of proctoring solutions at universities is reflection from a legal perspective. In particular, the implications of proctoring in terms of audit law and data protection law need to be reflected theoretically.

1.1. Digital (academic) education revolution

The digital transformation can be examined from a variety of perspectives and, even before the Corona pandemic, hinted at the transformation of the professional and educational world into increasingly flexible and digital spheres. The discussion about "New Learning" (Foelsing & Schmitz, 2021) and the debate about digital competencies (KMK, 2021) can serve as theoretical foundations for this argumentation.

Digitalization as a megatrend (Heuer, 2015) and at the same time as a principle of the "New Work" movement (Gongdorf, 2019) have for some years already presented companies - and also educational companies - with the challenge of responding with new and digital forms of work and also learning and teaching opportunities in order to employ and qualify their target groups according to their needs and starting points. The "New Learning" approach views educational technology and its further development as an opportunity for universities, without ignoring the risks, and aims to increase the digital skills of students (The Hagen Manifesto on New Learning, 2022).



The demand for digital competencies (KMK, 2021) and so-called "future skills" (Stifterverband, 2021) at German universities has also been heard for many years. The topic of digitization is therefore not only a result (new learning approach) or a direct subject of teaching/learning (KMK approach), but also indirectly a subject of university management.

If universities want to implement New Learning and equip their students with digital skills, this development cannot focus solely on the teaching process, but must also include the examination process. Accordingly, the entire student life cycle must be consistently digitized by university management in order to avoid media discontinuities and to ensure that the teaching/learning cycle is uniform.

1.2. Higher Education Management & Digitization

The management of (academic) educational institutions, such as a university, considers at its core, among other things, the entire "lifecycle" of students with the aim of ensuring the smooth support of all (administrative) processes from the application to the issuance of the certificate. The technical terminology of such an approach is called student lifecycle management (SLCM) (Seidler, 2010). In order to meet this requirement, not only the digitization of teaching (in the case of distance learning or, for example, in the event of a pandemic) but also the provision of examination services must be taken into account and, if necessary, transformed - should demand on the part of the students require it.

Empirical findings from the Distance Learning Report (BIBB, 2020) , the Stifterverband (Hochschulbildungsreport, 2019) and the Trendstudie Fernstudium (IUBH, 2021) can be used as reference values here and show that demand in the education sector for flexible and thus digital offerings is steadily increasing.

The SLCM, as a specific field of academic management, must therefore face the digital transformation (Structural Concept SLCM of RWTH Aachen University, 2021) in order to digitally map the entire higher education cycle.

The scientific literature on education management (with a focus on higher education management) clearly describes the trend toward digitization (Dittler & Kreidel, 2017) and has been doing so for several years.



The discussion in the literature about the "university of the future" (Ehlers, 2017) also points clearly in the direction of consistent digitization of academic education. It is becoming clear that higher education will be a digital education in the future, in which all sub-processes will (have to) be thought of and implemented as digital alternatives if an academic education program is to be fit for the future. Digitization enables students to acquire knowledge flexibly and in a self-organized manner. Consequently, such a digital transformation also includes the possibility of conducting examinations digitally, and approaches of a "University 4.0" (Henning, 2017) could currently already be implemented if university management makes it possible. Visions of the future, including the use of artificial intelligence (Handke, 2017) in academic education, are already being considered and discussed for the future, but are currently (still) rarely implemented. By reflecting on the current and above-mentioned literature it becomes apparent that proctoring as a building block of higher education is still an underdeveloped but necessary component of educational work in the academic education market and will be an increasingly strong essential component in the future, which must be regulated by higher education management.

In this respect, the management of scientific institutions differs significantly in terms of requirements from other organizations, for example in business (Sack, 2019). The world of science, for example, is "unfamiliar" with the concept of "leadership" (Sack, 2010) and traditionally ascribes rather little importance to the leadership of universities. Nevertheless, the basic structure of scientific institutions is such that they are basically per se "continuously breaking new ground" (Sack, 2019, p. 6). The "scientific world is thus more innovative than almost any other sector of the economy or society" (ibid., p.7). However, if this is to include not only their research outputs, but also their teaching/learning innovations such as proctoring, one has to ask what particular kind of management and leadership universities need to implement these permanent innovation cycles in all areas.

Linda A. Hill presents her own leadership model (Hill et al., 2014) and shows how universities can manage internal tension, for example, which serves as the basis for innovative further development. This capability is translated under the keyword "ambidextrous leading" (Sack, 2019), which says to do something, but at the same time not to let something else happen. Transferred to the introduction of proctoring procedures, this could mean, for example, that universities do not have to completely "throw overboard" the traditional forms of examination and



procedures in order to test and implement the innovative alternative forms such as proctoring in the examination process.

Thus, in the management and leadership of higher education institutions, it might be enough - related to proctoring - to challenge the "tried and true beliefs and approaches," according to another management theory. To cope with "adaptive challenges, trying out and experimenting with new ideas" (Heifetz & Linsky, 2002) is essential, according to Heifetz's theoretical approach. Kotter also makes a clear distinction between the terms leadership and management of organizations (Kotter, 2001), whereby he sees management more as the implementation processes within the given structures of the organization and leadership more as the strategic processes such as the search for a vision and the shaping of change.

According to Norbert Sack, an expert in science leadership, one of the most obvious challenges now and in the future in science leadership is that of digitization (Sack, 2019, p. 142). This challenge in turn brings with it the requirement for the leadership of, for example, universities to constantly manage change. Only universities that succeed in driving forward the transformation of processes in digitization in research and teaching can continue to be competitive in the future. Change management and the personal ability of managers to generate and accompany change in the organization within the university will become a core competence (Sack, 2019, p. 160).

If, according to Sack, leadership of a university is understood to mean, among other things, transforming this organization into the future (ibid., p. 3), then the sub-segment of introducing proctoring solutions can also be included in this. In short, every university that wants to provide future-proof services and every university management (rectorate and management) that wants to lead "its" university into the future cannot avoid the topic of proctoring - along with many other topics.

1.3. Theoretical framework on proctoring in examination law

The examination law requirements for the use of proctoring solutions are characterized by the tension between freedom of teaching on the one hand and the right to examination on the other, as well as the challenge of ensuring equal opportunities. From an organizational point of view,



the university regulations must also include rules on the specific examination modalities in order to comply with the proviso of the law (Fischer & Dieterich, 2020, p. 657).

Decision on the form of examination

The freedom of teaching, which is initially guaranteed without restriction by fundamental rights under Article 5 (3) of the Basic Law, finds its limit in the students' freedom of learning, which is also guaranteed by Article 5 (3) of the Basic Law (Meyer, 2020, p. 273). Teachers can therefore be obliged to conduct examinations in digital form via online formats if there are no other justifiable ways to hold the examinations (Meyer, 2020, p. 273). How instructors fulfill their obligation within the existing online formats, on the other hand, is up to them and cannot be prescribed by the universities (Meyer, 2020, p. 273).

Whether online examinations can also be offered outside of pandemic-related contact restrictions is decided by the higher education institution in a study regulation or examination regulation, insofar as there is no specification in the state higher education laws. These set the framework for possible examination formats with regard to the subject matter, type and form of study achievements (Waldeyer in Geis, 2022, HRG § 15 Rn. 54). The university has a broad discretion with regard to the content of the examination regulations, which must be based on the purpose of the respective performance assessment (Fischer, Jeremias & Niehus, 2018, marginal no. 12).

If several different examination formats are possible within the framework of the examination regulations, the university lecturer responsible for the course can decide independently, at his or her own discretion, whether and in what way a performance assessment should be carried out and with what requirements (Waldeyer in Geis, 2022, HRG § 15 Rn. 54). In addition to potential encroachments on the right to informational self-determination, within the framework of this exercise of discretion, the student's interest in an optimal retrieval of the knowledge imparted in the course and the competences acquired in the course is likely to be of particular importance. This "right to examination" finds its fundamental legal anchoring in the performance dimension of Article 12 (1) of the Basic Law (Fischer & Dieterich 2020, p. 657). According to this, universities are obliged to offer suitable examinations for their students so that they can realize themselves within the framework of the freedom to choose a profession.



Principle of equal opportunities

The central criterion in the conduct of audits is the observance of equality of opportunity. This arises from the general principle of equality in Article 3 (1) of the Basic Law and requires the most appropriate and fair solution possible, taking into account different possibilities for differentiation, whereby the weightier the impact of inequalities on other fundamental rights, the narrower the scope for design (Fischer & Dieterich, 2020, p. 657). Particularly in examinations, which can have a direct impact on the exercise of professional freedom, special care must therefore be taken and attempts at deception must be prevented as far as possible. The relevance of equal opportunities under fundamental rights also requires, among other things, measures by the university to compensate for disadvantages that may arise from particular external circumstances (ibid., 2020, p. 657).

Against this background, e-examinations (see Chapter 1.4.) should not be regarded as a new, independent type of examination. Instead, they can be classified as a variant of the classic types of examination (written, oral, electronic or practical examination) that can already be carried out in the classroom (Dietrich, 2021). However, this does not mean that both variants of an examination are to be equated in terms of examination law against the background of equal opportunities, which is illustrated by the exemplary combination of two examination cohorts to form a hybrid examination cohort.

In the case of hybrid examinations offered in parallel, in which the same examination performance is to be performed both by some examinees in presence and by other examinees in the form of an online examination, the different external circumstances are likely to be so significant due to the unequal opportunities for cheating that practically no measures are conceivable to create the required equality of opportunity between the examinees. Thus, in addition to the classic possibilities of cheating in a presence examination, it would be conceivable, for example, to communicate during the examination with others present in the room undercover or with fellow examinees, to have solution hints available in the immediate vicinity of the workplace or to research answers online via one's own computer.



1.4. Theoretical framework of proctoring in terms of data protection law

While at least the formal challenges under examination law can be adapted relatively quickly in the examination regulations as a result of the switch to digital teaching, the data protection assessment of the monitoring measures envisaged to ensure equal opportunities under examination law entails various challenges for university management (Sandberger, 2020, p. 155).

This is because personal data within the meaning of the GDPR are already processed during the transmission of image and sound recordings for the identification of the examination candidates as well as for the actual examination supervision, for which the respective university is responsible (Morgenroth & Wieczorek, 2021, p. 7). In the case of other forms of audit supervision, other data protection-relevant processing operations may also be involved. This results in various requirements for the higher education institutions, in particular with regard to the design of technology, cooperation with service providers, information of the data subjects, and documentation of data protection-compliant processes.

The question of whether data processing is permissible in principle at all is based on a fundamental prohibition with reservation of permission as well as the principle of necessity. According to Article 6 (1) of the GDPR, processing of personal data is only permissible if it can be based on a legal basis. In the case of state universities, the legal basis may be the consent of the data subject or data processing necessary for the performance of tasks in the public interest. In the case of private or (also) privately operated state universities, the legal basis may also be the need to fulfill a contract or to protect legitimate interests.

Furthermore, as an interference with the fundamental right to informational self-determination, data processing may only take place if it is suitable, necessary, and proportionate for the legitimate purpose.

The above-mentioned theoretical discussion points are intended to make it clear that a critical and constructive approach to the topic of proctoring at universities (as a special topic of digital transformation in the higher education sector) is unavoidable (in Germany and elsewhere), but



that several management challenges and legal regulation requirements must be taken into account.

In the further course, these challenges will be further substantiated and operationalized by recommendations for action.

2. Discussion & recommendations for action

In the following, three topics will be singled out in aggregated form, outlined in a critical and constructive manner, and transformed into recommendations for action.

2.1. Fake it - before you make it!

Online examinations require a considerable amount of effort to reduce external influences to the necessary level. The diverse possibilities of online monitoring can only prevent attempts at cheating and thus contribute to equal opportunities. In addition, it is above all necessary to compensate for circumstances that arise from the fact that the university cannot design the examination environment itself. For example, it must be taken into account that students live in different situations and may not have a suitable place to take the examination without being disturbed. Furthermore, students have different technical equipment. This concerns, among other things, the Internet connection, which, especially in rural areas, can only guarantee permanent video transmission to a limited extent. The same is likely to apply to shared apartments, where several roommates would have to dial into their exams at the same time. Particularly if a video and audio track as well as other data are to be transmitted in addition to the exam transmission, this can lead to technically induced disruptions. This particular stress situation is perceived differently by the students and is therefore difficult to compensate for with a blanket time compensation.

2.2. Recommendation: Create exam environments & enable test runs.

To compensate for these potential disadvantages, universities should therefore provide computer workstations - to the extent that this is permissible in view of potential contact restrictions - that allow examination participation without disruptions. These workstations need not be fully



equipped with computers. A quiet testing environment and a reliable WLAN connection can sometimes already be sufficient to counteract disadvantages at the home workplace. Care should be taken to ensure that no separate examination supervision is carried out in presence in the workspaces on campus, in order to create the same framework conditions on campus as would exist at the home workplace.

In order to prevent the risk of individual malfunctions, further preparatory measures such as software training, sample exams, and a test to check the performance of the Internet connection and the hardware of student devices are recommended to ensure that the software on the devices functions without errors. Any faults that occur should be reported in good time before the exams begin.

The principle of conscious acceptance of risk applies. According to this, an examinee who consciously accepts limitations to his performance and does not assert these immediately can no longer claim to have achieved a poorer result due to the limitation (Detmer & Hartmer, 2016, para. 39.). This must apply in the same way to obstacles to performance and restrictions that do not arise from the person of the examinee but are justified by his or her equipment and thus lie within his or her sphere. Precisely because circumstances that are not readily apparent to the examinee or are not comprehensible in their complexity can still be objected to after the start of the examination (Birnbaum, 2021, § 4 marginal no. 53), a prior mock examination and a test of the Internet connection and the hardware are of particular importance.

2.3. Establish consent management!

First of all, if consent is used as a legal basis, the question arises as to whether it can be effectively obtained from students by the universities at all. This is because consent must be given voluntarily. According to recital 42 of the GDPR, this is assumed if the data subject has a genuine and free choice, i.e. is able to refuse or withdraw consent without suffering any disadvantages. In addition, the special relationship between the university and the students must be taken into account. Recital 43 of the GDPR already gives rise to fundamental concerns regarding voluntariness if the higher education institution as an authority wishes to obtain consent from students. Due to a fundamentally existing imbalance of power, it can therefore



generally not be assumed that the decision is unconstrained (Albrecht et al., 2021). Thus, the Hamburg data protection authority also generally rejects voluntariness in exam monitoring (Fehling, 2020).

However, the requirement cannot be seen as a blanket exclusion of the possibility of consent. Rather, according to recital 43 p. 5 GDPR, an involuntary decision can only be assumed in view of all the circumstances if no uncoerced decision can be assumed due to a clear imbalance. That the legislator did not assume a fundamental compulsion due to the subordination relationship is shown by a comparison with Art. 6 (1) subpara. 2 GDPR. This prohibits public authorities from relying on legitimate interests as a legal basis for processing for the performance of public tasks. If consent could never be considered as a legal basis for processing by public authorities due to the existing imbalance, it would have been prohibited in the enacting terms of the GDPR, just like the invocation of legitimate interests (Albrecht et al., 2021). It can therefore be assumed that universities can in principle rely on consent as a legal basis.

2.4. Recommendation: establish central consent management

Nevertheless, as a precaution, universities should be advised to obtain consent centrally and not via the examiners and teachers responsible for students, who could potentially take students' examinations in the future. Indeed, asking for consent through examiners in the hope of getting a better grade could lead to involuntary declarations of consent.

However, the extent to which the students' decision can be regarded as voluntary must be assessed on a case-by-case basis, as explained above. In particular, the concrete circumstances of the respective students are likely to play a decisive role. In addition, at least in times of pandemic-related contact restrictions, the question of whether the examination would have continued to be conducted, postponed, or cancelled without the digital supervision is of fundamental importance. In the case of the University of Kiel, the Higher Administrative Court of Schleswig-Holstein assumed that without the video supervision, no exams would have been held either and students would have had to make up the exams in subsequent semesters (OVG Schleswig-Holstein - Ref. 3 MR 7/21 para. 13.). Based on this premise, it is argued that the video examination creates a further possibility of not having to postpone the examination. This would



expand the legal scope of the students concerned and not restrict it (Fehling, 2020). Thus, students would have another option to decide freely. Assuming that exams would be suspended for the period of contact restrictions, it could thus be argued that students would not suffer any disadvantages from online exams, since without the consent they would revert to the "normal" pandemic situation without exams. An advantage in itself could never call voluntariness into question, since the person giving consent always expects some benefit for himself or for third parties (Fehling, 2020).

However, the theory that the legal scope of the students is expanded by the additional examination offer can be countered by the fact that online examinations are likely to be the rule from the students' point of view, at least during the period of existing contact restrictions. Compared to other legal bases, consent depends precisely on the subjective decision of the persons concerned. It is therefore decisive how they may assess the situation, considering the information available to them.

As long as the online examinations follow the end of the courses, as is the case with the usual face-to-face examinations, and are offered to all students, while later examination dates in face-to-face cannot yet be determined, the offer of an online examination presents itself as the common form of examination from the students' point of view. The fact that the online examination is equivalent to the face-to-face examination is also manifested in the adapted examination regulations. Without the concrete prospect of an exam in presence, students may therefore assume that the online exam represents the standard form of examination, at least in times of pandemic, or in distance learning.

2.5. Potential disadvantages prophylactically compensate!

In addition to the above, it must always be examined whether students may suffer a disadvantage as a result of not consenting to data processing and therefore not being able to participate in regular examinations. In doing so, various potential disadvantages must be considered, and ways sought to compensate for them.

First of all, refusing consent could prove to be an extension of the study period for some students. Insofar as the last examination of the study program cannot be taken without consent



and the next examination date cannot be offered until the following semester, this represents a considerable disadvantage which, in the case of a concrete job offer already existing at the time of graduation, would not only cost a student's lifetime, but would also entail concrete financial losses.

A further disadvantage could be seen in the fact that the examination performances accumulate, and the students are exposed to an additional burden in later semesters. The argument that students have more time to prepare (OVG Schleswig-Holstein - Az. 3 MR 7/21 Rz. 38) cannot compensate for the higher examination load, at least in individual cases.

2.6. Recommendation: Establish examination stations

In order to compensate for these potential disadvantages, the universities should alternatively provide individual computer workstations - insofar as this is permissible in pandemic periods according to the individual state ordinances. However, if the respective students themselves belong to a risk group, so that they cannot reasonably be expected to travel to the university, or if travel to the university is not legally possible due to a high incidence at the place of residence, it may not be possible to compensate for the disadvantage in individual cases.

Such examination workplaces would also not necessarily have to be set up and operated at university locations. Such examination centers could also be offered flexibly everywhere through cooperation with other (education) providers (e.g. in cooperation with regional CoWorking Places).

The three points and recommendations above are, as the course of the elaboration has shown, not fully comprehensive and final to address every challenge in the topic area of the introduction of proctoring. Rather, they are about fundamental principles and an attitude that university management needs, according to the patterns shown above, to be able to start and implement the transformation. This requires neither an unreflective culturally optimistic nor a blocking culturally pessimistic attitude in management.

The three selected points are intended to illustrate that it is possible for every university to design "its" strategy and implementation variant on the topic of proctoring if it takes a culturally



critical view coupled with an agile approach. This paper is only intended to show that although the topic of proctoring involves a number of legal implications and technical aspects, ultimately the decision and implementation of proctoring - a consistent digital transformation of the SLCM - is always a decision made by the university management and is the responsibility of the university management. This work is intended to provide the impetus for setting up a university's own proctoring concept in order to lay a foundation for implementation.



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