Online examinations

How to carry out an online exam?

On Tuesday, February 7, 2023 at 4 p.m., the Online Teaching Team and innoCampus are offering an online consultation hour on digital on-campus and remote exams. All lecturers at the TU Berlin are welcome! We will meet in webex.

Online examinations are defined as assesments that are prepared, conducted and evaluated based on computerized processes. Online assesment procedures are diverse. They can range from semester work projects such as Project Diaries on a blog to laboratory protocols on a wiki and up to the documentation of experiments in a video format.

Oral examinations

Currently, oral online exams can be implemented by video chat. Under these particular circumstances the examination takes place without supervision on site. The candidate's audit capacity is confirmed orally and shall be recorded in writing:

- protocol template (German)
- Ergänzende Hinweise für Lehrende und Prüfungsausschüsse (German)

The **Examination Office** published guides for lecturers on how to conduct oral online examinations. Additionally, there are guidelines provided by the **Vice President for Education, Digitalization and Sustainability**.
Please consult and consider both guidelines:

- Onlineprüfungen, Referat Prüfungen (German)
- Durchführung von Mündlichen Prüfungen online, VP-SL (German)

Additionally to legal and organizational aspects we provide with practical advice and technical as well as didactic tipps on how to implement online examinations. Feel free to get in touch: medienkompetenz@zewk.tu-berlin.de.

Exam software

Currently, the **only approved method to conduct online exams** is a **local installation of the web conference tool WebEx**. The cloud solution is **not** authorized for use in online exams. Apart from a video chat function, you can share documents and images. WebEx contains a whiteboard and text-chat function. The latter allows for the share by link of larger files and media content stored at tubcloud. As soon as all candidates logged on to your web conference, you can „lock your Cisco WebEx Personal Room" (go to „Meeting"), to avoid distractions caused by a subsequent arrival of candidates.

To make sure that your candidate does not access any additional scripts or chats parallel to the

examination, ask your candidate to share the PC-Desktop instead of a single browser tab (go to „share" / share **screen**).

Didactical planning

- Prior to the exam you should define your examination criteria. Try to avoid common mistakes: Bewertungsfehler (German)
- After a switch to oral examinations, your exam questions should also match the content and learning objectives (German). Otherwise your online exam may unintentionally become more easy or difficult to pass.
- If possible, plan to conduct your oral examination in the form of a competence-based conversation (German). Do not just prompt your candidate's factual knowledge.
- Students with disabilities or chronic illness may be eligible for academic adjustments (in German: "Nachteilsausgleich"): Make sure to find out about the student's needs for adjustment well in advance (equal opportunities, accessibility).

Documentation of an exam

- If your candidate shares documents such as calculations, drawings or notes, record them with screenshots (keyboard combination on Windows PC: Shift + Windows key + S; the *Snipping Tool* is installed in the windows operating system: Start > Windows Accessories > Snipping Tool; „Ausschneiden und Skizzieren").
- **Save your screenshots** as image files and insert a unique file name (e.g. candidate's name and date of exam).
- Alternatively you can ask your students to produce that screenshot and send it as an image file to the examiners. Be mindful of the fact that you may not be able to control if the candidate makes any changes to the document thereafter.
- In order to comply with data protection guidelines on web conference recordings (German), please refrain from recording or enabling recordings in online exams (adjust your meeting settings accordingly).

Written online exams

online exams

A popular method of online examination are **e-assessments**: online exams that are evaluated automatically. Automation eases manual correction efforts and allows for statistical analyses.

Usually, this type of examination takes place **under supervision and on premis at a PC-Pool at TUB**. Due to the current pandemic it is an option to allow for students' participation in such exams at home.

In summer 2020, most written exams were rescheduled or took place in locations off premise or

auditoriums that were suitable for large crowds to meet distancing regulations. With regard to data protection guidelines as well as examination rules and regulatory frameworks by the state of Berlin, we are expecting further information such as on the controversial topic of "Online-Proctoring (German)".

Another option to conduct exams online are *Take-Home-Exams*. These are papers written "under unique conditions" (examples: Uni Bremen (German) and Tipps for Students (German)). you can implement this on ISIS/moodle based on the activity assessments (section: Provide material). Define the "availability" and do not forget to add the correct date and time to the section "Cut-off date" to disable further uploads after a set "Due date".

Depending on compliance with examination regulations, online tests can also be conducted as part of a portfolio audit (German).

Please always consult current information published by the Examination Office on the topic of "written examinations":

- Hinweise zur Durchführung von Prüfungen, I B – Referat Prüfungen (German)
- Guidelines provided by the **Vice President for Education, Digitalization and Sustainability**(German)

technical and didactical advice

If you conduct e-assessments without supervision (in contrast to on-premise assessments) this may allow for a higher risk of prohibited use of electronic tools or communication. It may therefore be feasible to conduct assessments in an **open book** fashion (in German: *Kofferklausur*). This format allows candidates to access tools or ressources. It therefore requires you to focus more closely on the evaluation of a candidate's competence.

In e-assessments, you may also choose a random order of questions (under a common topic) or given choice of answers. Another measure - if examination regulations allow - may limit the amount of time available to finish the assessment and to adapt grade criteria accordingly so that your assessment does not end up being too easy.

Technically, you can set up an e-assessments in ISIS/moodle based on the activity quiz. Due to legal grounds, you should familiarize your audience with this kind of online assessment prior to the final assessment. Over the course of your seminar you can either offer additional trainings in an unmarked quiz or conduct an online mock-exam.

Please also consider didactical, legal and organizational aspects. You will find more information on this in the ISIS online training E-Prüfungen (TUB credentials required for login; German). The course offers a checklist on online tests@home, guidelines on the use of multiple choice in e-assessments, presentation slides (see also ZEWK courses: „E-Prüfungen"). The course also contains a mock-exam to introduce different question types.

Didactically, your e-assessment should not impact on the degree of difficulty: after a conversion to the online format, your exam should neither become easier nor more difficult. Remember to not only pose questions to examine factual knowledge but also the understanding of processes and correlations as much as application scenarios. Examine if learning content and your assessment questionnaire meet your learning objectives (German). Objectives that meet the highest level are too demanding to be mapped on automated e-assessments. They are more suitably evaluated in essay

question types. You need to correct those manually but they will indicate competences rather than mere factual knowledge. Online essays are also much quicker and easier to read than handwritten essays. Another crucial advantage of e-assessments is the optional inclusion of images and animations.