

Guidance for online remote assessments

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1. General concerns that are common to all forms of remote online assessment

- Students will be required to have access to a suitable computer and a stable WIFI / broadband / internet connection as specified [here](#). IT specifications (microphone/webcam) and bandwidth might be problematic for some students, particularly in an online proctored examination. This may be more problematic for assessments that are delivered online for the duration of the test (e.g. via LEARN Quiz) compared with those that can be completed offline (e.g. via download/upload to OCM) and only require intermittent internet access. Support from the LEARN Team should be provided during the test period to respond to technical issues and students should be encouraged to contact the Exams Office in the event of a technical failure. Provision of 'on campus' assessment accommodation should be considered in exceptional circumstances (and on a case-by-case basis), if the student's internet access issues cannot be resolved prior to the examination.
- Scheduling of assessments should be carefully considered with communication between the course team, Exams Office and LEARN team in order to minimise, where possible, the load on the VLE during busy times. Release of the test over a 24 hour period allows students from different time-zones to engage when it is most convenient for them. Another option would be to release the test in designated 'windows', e.g. during the middle of the day or alternatively, one early morning session and another in the late afternoon. There are concerns regarding collusion, whereby students who have undertaken the examination during the early stages of the release period communicate with students who have yet to start the test. Social media posts are particularly problematic in terms of sharing information between students. This has been mitigated by self-regulation (students asked not to engage in social media/electronic communication with others during the test period), but it should be noted that this is difficult to monitor/police. Different versions of the test should be considered, if offering this in two different time slots.
- Tests should normally be time-limited once they have started and consideration given to the duration of the test period, with longer tests delivered in shorter 'chunks' (preferably one hour sessions) with breaks in between. Consideration could be given to allowing some extra time (e.g. 15 minutes) to compensate for a lack of familiarity with the online environment. Where the test is 'open' for an extended period, clear guidance should be provided in terms of expectations of how much time should be spent completing the examination.
- The security of questions is a concern. Online (non-proctored) delivery may release the questions into the public domain. Consideration should be given in terms of re-use of questions following delivery in an online environment. This may require more new questions being written and less reliance on 'banked' questions. This would have advantages in terms of provision of feedback, where model answers could be released/discussed with students without security concerns.
- There is an increased risk of academic misconduct (cheating or collaboration) with remote online assessments, compared with invigilated written examinations. Students are expected to sign up to an "academic honesty and integrity" statement and remote proctoring should be considered "the norm" as a replacement for invigilation. Academic (mis)conduct of students needs to be monitored for summative assessments, either through review of proctored recordings or plagiarism software for submitted pieces of work.
- A proctoring solution (Proctorio) is embedded within Moodle and should be employed for all summative assessments delivered using the Quiz environment. Students must

have a proctored formative assessment in advance, so that they can experience this online environment before any proctored summative assessment takes place.

Guidance is provided in LEARN to inform students on how online proctoring works and they will have an opportunity to familiarise themselves with the proctoring software through a test site. Students should be encouraged to resolve all Proctorio setup issues using the test site and through any formative opportunities prior to any summative assessments taking place.

- Special Exam Arrangements (SEA) will remain in place for students who have had these authorised by the Advice Centre. Students who are in receipt of an additional time allowance will have this included in the length of their exam period. Students with a rest break allocation will have this time added onto their exam time as they would for 'in person' exams. During proctored exams, students will not be able to leave the viewing area of their webcam to take their rest break, but getting up and stretching is allowed. Should students feel their approved SEA is not fully compatible with being proctored and not leaving the webcam viewing area, the Disability Adviser should be contacted in the first instance. Provision of 'on campus' assessment accommodation should be considered in exceptional circumstances (and on a case-by-case basis).
- Open book examinations may be considered as an alternative to remote proctoring. However, there needs to be some adjustment in the style of questioning to assess higher order cognitive skills (understanding, analysis, application and synthesis of information) rather than factual recall/knowledge. This may be more applicable to some types of assessment (CPRQ) than others (SAQ, MCQ). Plagiarism software (Turnitin) should be routinely used and reports evaluated in a systematic manner.
- Feedback to students from an online system might be superior to annotation of written scripts in terms of accessibility. The software used should encourage and facilitate staff marking and provision of individualised feedback that can be released in a timely manner.

2. Assessment types - Traditional V's Online formats

2.1 Single best answer (MCQ/EMQ)

Traditional format:

Invigilated exam hall delivery. Question paper provided as hard copy (generated from Ripley Systems). Paper-based answer sheet is completed manually by student. Scanned and automated marking. Statistical (item) analysis provided for QA processes. Spreadsheet provided for standard setting and incorporation into Final Mark Sheet.

Online format:

Online delivery via Moodle Quiz. Test could be either open-book (formative), self-regulated (formative) or proctored (summative). For summative assessment, the test should be released within a limited time window and be time limited once started. Test should be divided into one hour 'chunks' with breaks in between. Where possible and appropriate, questions and responses should be randomised in order and, if considered necessary, large student cohorts may be divided up into a number of smaller groups, with the paper divided into different sets of questions released in each consecutive section.

2.2 Short answer / problem-solving questions

Traditional format:

Invigilated exam hall delivery. Question paper provided as hard copy. Paper-based answer booklet completed by student. Scripts need to be distributed to markers (often more than one per question). Manual annotation of scripts for feedback/justification of mark. Sample marking of hard copy. Review of scripts/markings by external examiners. Scripts made available to students for feedback (particularly failing students).

Online format:

Online delivery normally via Moodle Quiz. Test could be either open-book (formative), self-regulated (formative) or proctored (summative). For summative assessment, the test should be released within a limited time window and be time limited once started. Test should be divided into one hour 'chunks' with breaks in between. Possible to release general feedback (shortly after the examination) and individualised feedback (after completion of marking and release of marks) to all students. For problem-solving questions of a more discursive nature it might be considered more appropriate to deliver these as in section 2.3, below.

2.3 Long answer / essay / CPRQ

Traditional format:

Invigilated exam hall delivery. Question paper provided as hard copy. Paper-based answer booklet completed by student. Scripts need to be distributed to markers (often more than one per question). Manual annotation of scripts for feedback/justification of mark. Sample marking of hard copy. Review of scripts/markings by external examiners. Scripts made available to students for feedback (particularly failing students).

Online format:

Online delivery via Learn/Online Coursework Management (OCM) system as an 'open book' or 'restricted resource' assignment. After ID Verification using Proctorio, students can access the document/task from Learn, must complete this within the designated time period and upload responses via OCM. Consideration should be given to the length of time students are expected to work on the assignment; this should be long enough to allow completion of the task, but not so long that they spend an extended period of time working on it. An advisory word count may be suggested to encourage students to provide responses that are precise and succinct. Turnitin must be reviewed for any evidence of plagiarism.

2.4 Research project

Traditional format:

Students complete their research project. One draft version submitted for feedback. Final document submitted electronically via OCM. Turnitin review for plagiarism. Either single marked and sampled or double marked online via OCM. Facilitation sometimes required for discrepant marks. Written feedback provided. External examiners can review remotely via OCM.

Online format:

Unchanged.

2.5 Viva voce examination

Traditional format:

Student undertakes a viva voce examination in the presence of two (or more) examiners.

Online format:

Student undertakes a viva voce examination in an online environment (e.g. MS Teams, Zoom) with two (or more) examiners present.

2.6 Assessed presentation

Traditional format:

Student presents their work using a visual aid (Powerpoint slides or poster) in the presence of two (or more) examiners. Marking rubric typically used for marking/feedback.

Online format:

Student presents their work by sharing a visual aid (such as Powerpoint slides or poster) in an online environment (e.g. MS Teams, Zoom) with one (or more) examiners present, or students submit their work as a pre-recorded file, such as a narrated Powerpoint presentation, video recording or similar type of AV file, for subsequent marking by examiners. Marking rubric typically used for marking/feedback.

2.7 ISF oral

Traditional format:

Students participate in a multi-mini interview style oral examination in the Dissection Room, where they are questioned around various 'props' in terms of their ability to integrate structure and function. A potentially 'tactile' experience.

Online format:

In the event of government restrictions preventing on-campus delivery, this assessment may be delivered online. Discussions are initiated by sharing a visual aid (image, photograph) in an online environment (e.g. MS Teams, Zoom) with one (or more) examiners present. Marking rubric typically used for marking/feedback.

2.8 OSCE

Traditional format:

Students must negotiate a number of stations to demonstrate a variety of clinical skills, while being observed and graded by examiners.

Online format:

It is not possible to replicate this type of practical skills assessment in an online environment. A modified formative OSCE experience may be required in terms of reduced numbers of stations to allow social distancing measures to be implemented.

Appendix 1 - Set-up and delivery guidelines

The set-up and delivery of online assessments necessitates that in planning for them we fully consider the potential impact on the delivery system, LEARN. Various internal and external factors can put additional load on the system and this has the potential to cause local or system-wide issues for students during an assessment. It is necessary to be aware of what factors put undue load on the system and how we can plan assessments to mitigate these risks. This planning for setup and delivery of assessments needs to be done in coordination between the Course team, Exams office and the LEARN team. Ideally this should be planned so that there is time in advance of any new or potentially risky assessment set-ups so that testing can be done in conjunction with our VLE hosting provider Co-Sector and with input from Proctorio, prior to the online assessment solution being deployed for the first time in a live assessment.

Key considerations to mitigate risk are:

1. Scheduling -

- **Internet issues** - An agreed exam timetable is essential as it provides all the details of the exam including dates, times, student numbers and format. This needs to be formally agreed and signed off by Exams, LEARN, IT and Registry with further consultation with CoSector and Proctorio in order to avoid peak times for the internet more generally (Ex. Monday at 9:00 am) or at-risk periods for LEARN (See below)
- **Simultaneous assessments** – consideration needs to be given to multiple assessments being scheduled at the same time as this can amplify issues even potentially for small cohorts.
- **Competing internal activities** - Whilst it may be possible to optimise the exam timetable, the nature of LEARN as a teaching environment means that it can be used, without warning, for other teaching activities; marking or ad hoc activities which could impact on system performance as a whole (Ex. the scheduling of a College-wide quiz or live streamed event at the same time as an exam?; grading using OCM). It may be necessary to look at different solutions in the longer term for hosting online assessments, so they do not compete with teaching activity.
- **Maintenance or outage windows** - Exams should not be scheduled to conflict with a planned Moodle outage or maintenance window. The security and stability of our Moodle platform is paramount. Essential updates and maintenance work must not be hindered due to exams (or the need for resources to be available 24/7 for students revising for exams).

External at-risk periods - CoSector, operate an at-risk period out of operational hours on Tuesdays 7am - 9am. This must be respected as our hosts may be using this time to carry out essential maintenance on their underpinning infrastructure which is beyond our control.

Internal at-risk periods - Additionally, there should be a weekly RVC 'at risk' period where the LEARN Team can safely carry out system administration tasks / analytics without risk of overloading the system. Due to resourcing constraints this is not currently possible out of hours.

2. Functionality

The use of each of the following can also cause additional load on the system and therefore needs to be carefully considered in relation to scheduling and the size of the assessment.

- Simultaneous access to OCM during an assessment submission
- Simultaneous access to a Moodle quiz during an assessment or ID check
- OCM submissions and OCM marking - OCM struggles with large numbers of simultaneous submissions occurring at the same time as examiners are marking submissions
- The use of the auto-save function impacts system performance
- Number of questions/page also impacts system performance

3. The size of the cohort

For large cohorts a simulated assessment should be run in advance. This requires time to set up the simulation with our VLE hosting provider Co-Sector.

4. Recommendations for specific assessment types

4.1 Single best answer (MCQ/EMQ)

Set-up:

- Consider the number of questions presented to a student per page. If possible, place 3/5 questions on the same page. The fewer page loads there are the less load on the system.

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.
- Don't start everything on the hour. Metrics show that this is when systems are at peak load. Stagger start times to avoid concurrency issues i.e. 100 students all hitting the start quiz button at the same time (i.e. consider starting at 9:20am).
- Avoid multiple exams starting at the same time
- Avoid exam crossover (i.e. one exam finishing at 1pm whilst a second is set to start at 1pm) as for this short period load on the system is potentially doubled. Consider staggering the start times as recommended above.
- Scheduling a timed 1-hour exam to take place within a 2-hour window is a good way to manage load. The flexible start/finish time reduces the number of students concurrently writing to the database.

4.2 Short answer / problem-solving questions

Set-up:

- Consider the number of questions presented to a student per page. If possible, place 3/5 questions on the same page. The fewer page loads there are the less load on the system.

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.
- Don't start everything on the hour. Metrics show that this is when systems are at peak load. Stagger start times to avoid concurrency issues i.e. 100 students all hitting the start quiz button at the same time (i.e. consider starting at 9:20am).
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- Scheduling a timed 1-hour exam to take place within a 2-hour window is a good way to manage load. The flexible start/finish time reduces the number of students concurrently writing to the database.

4.3 Long answer / essay / CPRQ (using OCM submission)

Set-up:

- Students should be asked to access the Moodle exams to complete the ID verification process and to download the question paper. Students should then be instructed to complete and exit the proctored exam area.
- Consider placing an exam timer on the ID verification part of the exam so that after 5 or 10 minutes (which should be sufficient time for a student to complete the ID check and question paper download) this proctored quiz is automatically closed – thus saving on load and student bandwidth.
- Single question exams that require essay style answers should not be proctored. This style of assessment should be redesigned.

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.
- Don't start everything on the hour. Metrics show that this is when systems are at peak load. Stagger start/finish times to avoid concurrency issues i.e. 100 students all hitting the start quiz or submit button at the same time.
- Avoid multiple exams starting/ending at the same time
- Avoid exam crossover (i.e. one exam finishing at 1pm whilst a second is set to start at 1pm) as for this short period load on the system is potentially doubled. Consider staggering the start times.
- Moodle performance suffers most when writing to the database. If possible avoid excessive load by having students submitting OCM assignments at the same time as staff are marking and submitting their scores and feedback.

4.4 Research project/Coursework submission

Set-up:

- Can remain largely unchanged

Online delivery:

- Avoid peak submission times e.g., Fridays, 1pm.

4.5 Viva voce examination (using MS Teams or Zoom)

Set-up:

- Can remain largely unchanged

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.

- Don't start everything on the hour. Metrics show that this is when systems are at peak load.

4.6 Assessed presentation

Set-up:

- If students create a narrated PowerPoint or video files these (depending on duration) can be large video files. It is worth considering the best place for students to submit these:
 - a specifically set-up OneDrive could be used to prevent excessive bulky files being added to RVC LEARN.
 - a Panopto assignment folder could also be created which will allow students to create a video using Panopto which is then saved within an assignment sub folder of the courses' main Panopto folder.
- Turnitin does not work with video files – if submitting video files Turnitin will need to be turned off.

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.
- Don't start everything on the hour. Metrics show that this is when systems are at peak load. Stagger start/finish times to avoid concurrency issues or issues with local internet capacity.

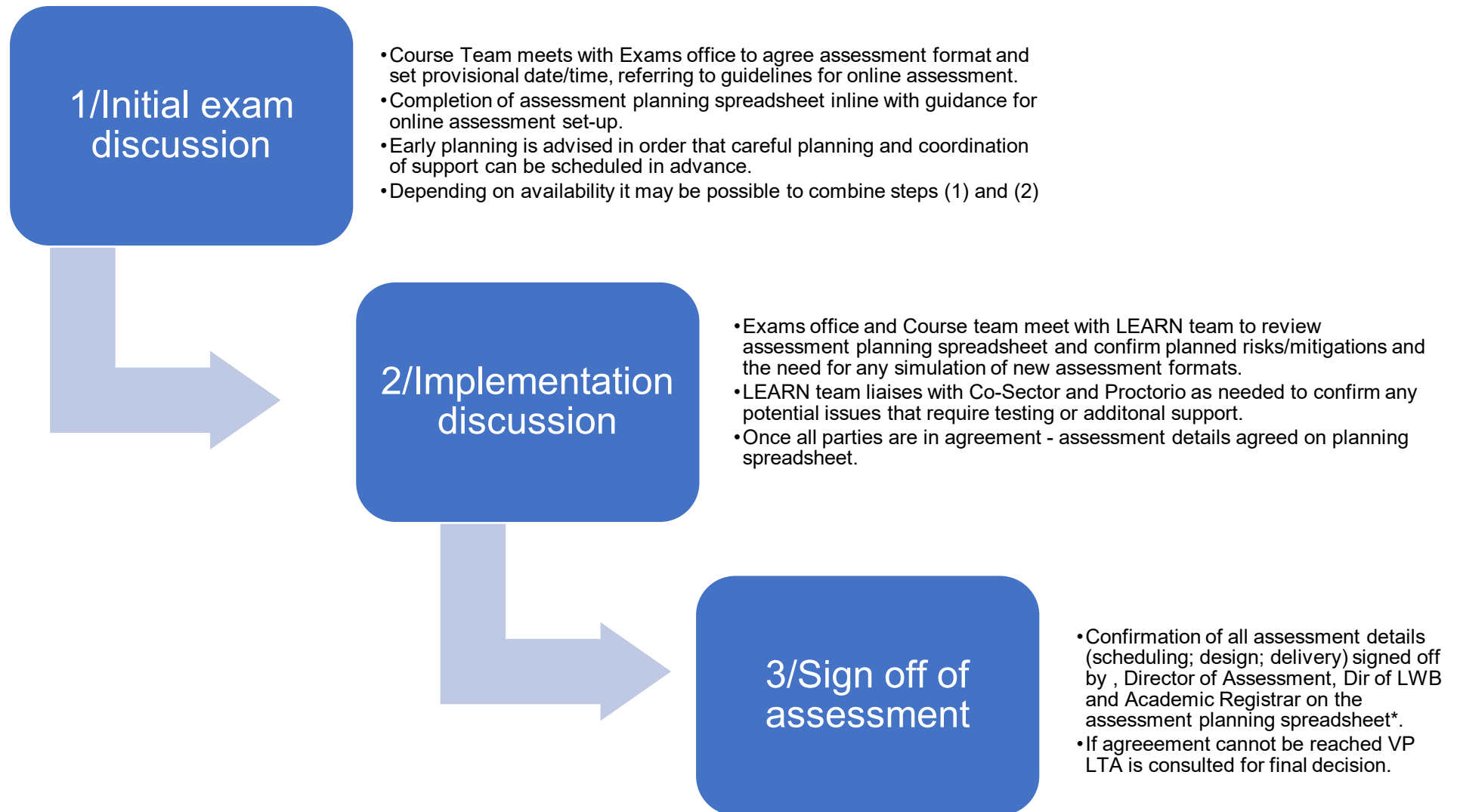
4.7 ISF oral (using MS Teams or Zoom)

Set-up:

- Format remains largely unchanged
- Delivered remotely using MS Teams or Zoom

Online delivery:

- Avoid times when users' internet connectivity is likely to be at peak usage e.g., Mondays, 9am.
- Don't start everything on the hour. Metrics show that this is when systems are at peak load.



*This process is done on an ongoing basis as part of the assessment planning process.