

CIE DigiGuide: Best Configuration Options for running Online Exams through Canvas Quizzes

This DigiGuide provides an overview for the setup of online exams through the Canvas quiz tool using approaches to reduce the opportunity for cheating or collusion.

It is generally recognised that online remote examinations can be difficult for staff to design and deliver, and for students to undertake. We worry that an exam completed from a remote location can be open to cheating and collusion leading to unfair assessment. They can also be a great source of anxiety for students who may be logging in from a suboptimal location without access to reliable computing facilities (i.e. broadband connection), they may not feel confident about how the quiz will work and worried that they will have no one to turn to for support.

Therefore, we encourage programme and module teams to move towards evaluating assessment, and examine if the methods used would benefit from revision to make them more appropriate and inclusive for all. Please see our spotlight guide on the [Inclusive Curriculum](#) for an introduction, and also this excellent resource on [replacing on-site exams in a time of coronavirus](#) from Brown & Sambell.

However, in the event that an online, unseen exam is required this document sets out the best approaches for running exams through the Canvas quiz environments.

For getting started advice around using Canvas Quizzes for online exams including the best settings to choose please see our wider range of [resources](#) in this area. If you require technical support, please use the Canvas Support available through the Help icon in Canvas. For wider curriculum or assessment advice, please email the Centre for Innovation in Education at cie@liverpool.ac.uk

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Include instructions for students to orient them for the exam before they start

Include clear instructions for the students on;

1. Exam etiquette.
 1. *How long the exam will be. Make it clear to students if a time-limit is applied.*
 2. *How many questions and what type of questions are included (i.e., 10 Multiple choice Questions and 1 Essay).*
 3. *How many attempts the students will be permitted.*
 4. *Where to get help (technical support/accessibility issues – CSD/Lecturer).*
- Allow the students to familiarise themselves with the exam platform and format through a Mid-term or formative assessment.
- Include plagiarism statement before the exam starts.
- Include links to KnowHow Academic Integrity resources and/or programme handbook. This information should be provided in advance of the scheduled exam.

Designing and presenting questions, limiting plagiarism

- Use the data available. Learn more at [Canvas Quiz Analytics](#)
- Design it out of the assessment through question choice/use of application of knowledge rather than recall. For some examples of this, please visit [lectureremotely.com](#)
- Design the questions as if for an open book exam.
- Consider separating MCQs and written response questions for submission separately, particularly if you want written elements to be submitted through plagiarism detection software.
- Use Lockdown browser to secure the exam environment within Canvas.

Designing and presenting questions to limit collusion

1. Question pools can help to create a randomised quiz experience.
2. Randomise the sequence of questions.
3. Shuffle options within questions.

Quiz settings for optimising the running of online exams in Canvas

This section provides an overview of Canvas quiz settings that you can use to optimise the quiz environment for online exam use. Canvas has two quiz engines ('Classic' and 'New Quizzes') which replicate many of the settings but have slightly different approaches for use - instructions are provided.

Some of these settings are highly recommended for a summative exam to help reduce collusion or cheating. Others are also useful in this area but might introduce new challenges, particularly around accessible and inclusive assessment design, for these we have tried to explain potential impacts so that you can make an informed decision about which settings to use. And for further reading in the area of reasonable adjustment and inclusive assessment design please see our HAL resource: [Guidance on supporting students with reasonable adjustments using online quizzes in Canvas](#)

You will now find getting started guidance on the various settings that are possible within an online exam in canvas. These settings have been categorised (A-D) relating to their importance in enabling a consistent online examination:

A - Important – use these: using Assign Dates; Disabling Test Results and Feedback; use a Time Limit; disallow Multiple Attempts

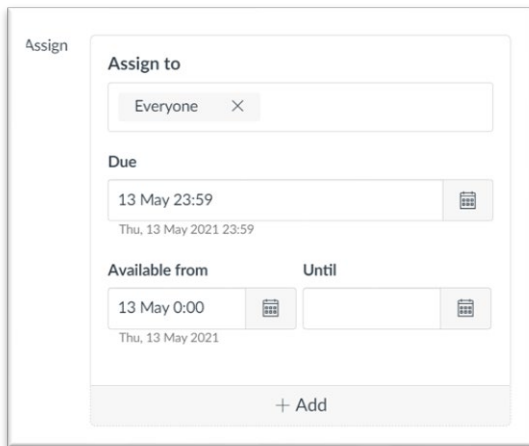
B - Do this if time permits: Randomised selection of Questions

C - Optional settings that you might consider: Shuffle questions and answers; Show One question at a time; Password Protection; Restrict Location; Respondus Lockdown browser

D - Avoid using unless completely necessary: Lock questions after answering (prevent backtracking)

A - Assign Dates

Assigning dates gives a 'window' of time in which students will be expected to complete the exam.



Available From prevents student access to an exam ahead of time (*Note: the quiz still needs to be Published*).

Due is effectively the deadline indicated to students within the course/calendar. Anything submitted after this date will be flagged as late (blue cell colour in Grades, or LATE flag in Speedgrader during marking).

Until is the date on which no more submissions are accepted. If a student is undertaking a quiz when the Until date/time is reached their test paper will be submitted automatically. **Note:** If a timer 'Time Limit' is also being used, then the timer that students see will be adjust to factor in the Until date – this can cause problems particularly where students have been given a time extension through the Moderate tool. For this reason, until we become more familiar with Canvas, we recommend that the Until date/time is set far into the future or left intentionally blank.

Sometimes Assign date is used to limit the time in an exam, but for this there is a dedicated *Time Limit* which offers greater control and monitoring (see below).

The Assign dates are set within the overall quiz edit screen (not the Settings area in New Quizzes). Instructions here: [How do I make a quiz available before or after the due date?](#)

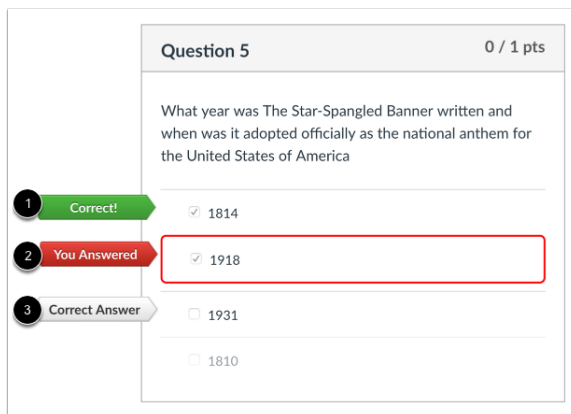
A - Disable Test Results and Feedback

Disables the return of results and feedback immediately following the exam, particularly for self-marking question types, thereby reducing chances for collusion.

Unfortunately this is an easy setting to overlook, complicated by there being two parts.

Instructions:

1. Turn on [Manual Post Grades](#)
2.
 - a. Classic quiz - In the *quiz options* screen disable the setting [Let Students See their Quiz Responses](#)
 - b. New Quiz - In the *quizzes settings* area, enable the [Restrict Student Results View](#) setting, and deselect/uncheck the view options that are revealed.



A – Apply Time Limits or Additional Time

A way to limit the amount of time students have to complete an exam. Students have an equal time to ensure fairness, and also limits the ability for students to use resources during the assessment.

The timer begins to count down when the student begins the exam and will automatically submit at the end of the time. The timer will still count down even if the student leaves the quiz or disconnects from the Internet, and when the time elapses the quiz will automatically submit.

If students have Disability Support Plans in place where they need additional time, this can be configured after Publishing using the Moderate area of the quiz tools (please see our separate guide on [quiz moderation](#)).

If using the time limit feature, communicate this to student in advance, ideally allowing them to experience the quiz environment with the setting on a low-stakes quiz that they can take multiple times to test different computer setups. Think about how long it should take students to complete an exam, and provide additional time from the outset to account for technical issues or distractions.

The 'Until' assign date (see above), takes precedent over the timer. This means that Canvas will adjust the timer that the student sees to take into account the Until date when the quiz closes. (Our recommendation as above is to set the Until date far into the future or not set it at all.)

Instructions for Classic quiz: [What options can I set in a quiz?](#)

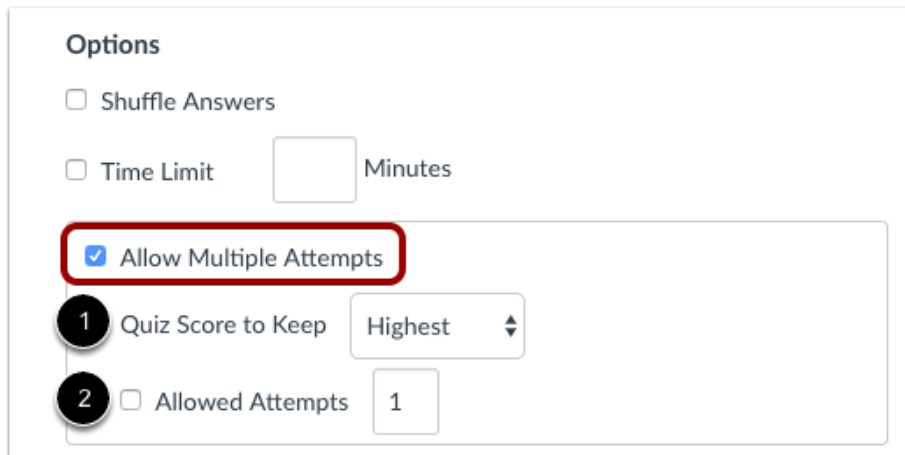
Instructions for New Quizzes: [How do I manage settings for an assessment in New Quizzes](#)

A – Disallow Multiple Attempts

Allowing multiple attempts on a quiz can be useful for practice tests and formative assessment where students will want to take a quiz again and again to improve their performance, but it's unlikely that this will be something you will need for an exam.

In some cases, where you do wish to allow multiple attempts you can have Canvas retain the highest, latest, average or first score of all the attempts.

Do not use this setting to grant a specific student with an extra attempt - do this instead through the Moderation tool ([How can I give my students an extra attempt?](#)). And by default students are able to leave and return to a quiz paper from where they left off until they have submitted or the time runs out - so again this feature is not for that.



The screenshot shows the 'Options' section of a Canvas quiz configuration. It includes several settings:

- Shuffle Answers
- Time Limit Minutes
- Allow Multiple Attempts (highlighted with a red box)
- 1 Quiz Score to Keep
- 2 Allowed Attempts

Considerations: If you are going to use multiple attempts for students to practice or for knowledge checks, it is worth considering how students receive feedback on incorrect questions.

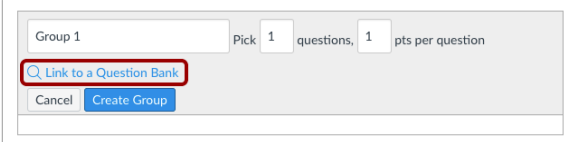
For more about multiple attempts see [Canvas quiz options](#).

B - Randomised Selection of Questions

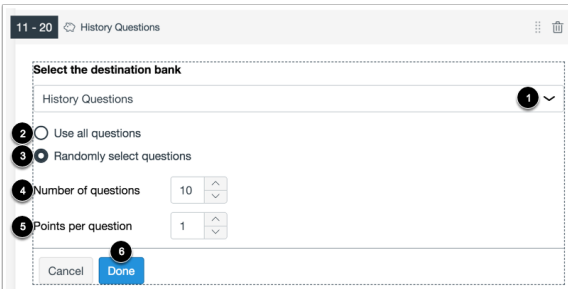
This is where the quiz presents questions to students that are randomly selected from a larger question bank/s. As students receive a personalised test paper, this reduces the opportunity for collusion.

Multiple question groups can be used and selected from, thereby ensuring students receive an equal number of questions from specific curriculum themes or difficulty etc.

The question banks requires a larger set of questions, which should be quality checked to ensure that they are at an appropriate level and robust. Questions can be improved upon year on year, as assessment statistics are returned. This approach takes time, however it is the 'gold standard' for online exams and so we recommend this approach



Classic Quiz



New Quiz

Instructions for Classic quiz: [How do I create a quiz with a question group to randomize quiz questions?](#)

Instructions for New Quizzes: [How do I add all items or a random set from an item bank to an assessment in New Quizzes?](#)

C - Shuffle Questions and Options

Canvas allows you to shuffle or randomise the order of multiple-choice questions and options.

The best practice is usually to order options alphabetically as this is what we are more familiar with in terms of reading order. You may also have reasons to offer options in specific order in your topic. Shuffling the order of options within a question and/or and the order of questions within an exam can be a good way to minimise collusion between students. However, you may set exam questions where the order of questions needs to follow a logical order, e.g. easier, shorter questions at the beginning, with longer, more complex questions at the end. In this case you could also consider 'Randomised Selection of Questions' based on types, or not using the shuffle option. Depending on which option you take, remember to be clear in your guidance to students.

Instructions for shuffling questions for a Classic quiz: [How do I create a quiz with a question group to randomize quiz questions?](#)

Instructions for shuffling answers for a Classic quiz: [What options can I set in a quiz](#)

Instructions for shuffling question and answers in New Quizzes: [How do I manage settings for an assessment in New Quizzes?](#)

C-Show One Question at a Time

By default, Canvas shows all quiz questions at once to students, however you can instead choose to only show one question at a time.

If your quiz is particularly long, by showing only one question at a time this would reduce the amount of scrolling students would need to do. If questions include rich media such as high resolution images or video, splitting the quiz across multiple pages using this setting would be less resource intensive for the students' computers to display, meaning that all questions would be more likely to display correctly.

If your quiz has questions that build on each other, then this may not be an option.

Instruction for displaying One Question at a Time in a Classic quiz: [What options can I set in a quiz](#)
Instruction for displaying One Question at a Time in New Quizzes: [How do I manage settings for an assessment in New Quizzes?](#)

C – Protect the Online Exam with a Password

A password (or 'Access Code') can be defined which students must provide in order to enter a quiz. This is often used to help ensure that only those students present in a live session (online or on-campus) can take the quiz, thereby ensuring exam conditions or in the case where there are two sittings of an exam.

But students can easily send a password to peers who are not there, and the use of a complex password can be a challenge and source of anxiety for students before the exam has begun.

Instruction for setting an Access Code in a Classic quiz: [What options can I set in a quiz](#)
Instruction for setting an Access Code in New Quizzes: [How do I manage settings for an assessment in New Quizzes?](#)

C - Restrict Location

It is possible to set a restriction on location as a way of ensuring that students can only take a quiz from an approved location, for example on-campus or approved examination centres where exam conditions are assured.

The students location is obtained from their *Internet Protocol address* (IP) which is the unique number given to all computers connected to the Internet, and specific IP numbers or a range of IP numbers are provided to Canvas to 'whitelist' those IP addresses for access.

Due to the dynamic nature of IPs, these can be tricky to obtain in advance particularly if students are completing the exam remotely or on their own device or internet connection. Computing Services Department can advise on IP ranges for on-campus locations, and test centres may also be able to do this.

As an alternative the use of *Respondus Lockdown browser* could be used (see below).

Quiz Restrictions

- Require an access code
- Filter IP Addresses

Classic Quiz

Time limit

- Filter IP addresses

Allowed IP range

- ex: 0.0.0.0
- to ex: 255.255.255.255

New Quiz

Instruction for filtering IP Addresses in a Classic quiz: [What options can I set in a quiz](#)

Instruction for filtering IP Addresses in New Quizzes: [How do I manage settings for an assessment in New Quizzes?](#)

C - Respondus Lockdown Browser

Respondus Lockdown Browser is a cross-platform internet browser that you can specify students must use in order to undertake a quiz. Without which the quiz will not open.

The browser then 'locks down' other features of the computer so that the student cannot use or switch between other software whilst undertaking the quiz. The aim here is to reduce cheating or opportunities for collusion.

Another benefits is that the browser is very simplistic, thereby helping to reduce distraction. It can also offer ensured level of consistency and experience across platform, e.g., for display of complex materials.

With students taking an exam remotely, of course the system is not watertight – student could just use a different computer or device to cheat, have another person present during the exam, or even just phone a friend. Respondus does promote a remote proctoring add-on where students are monitored, however the University is not seeking to use this approach, mindful amongst other things of privacy concerns. For this reason, where security is the primary consideration, it is traditionally only used on-campus or test centres (but the other benefits above may still apply for remote use)

Respondus Lockdown is fully integrated within Canvas, and when students attempt to access a quiz they are given a download option for the browser.

See our separate guide to [Respondus LockDown Browser](#).

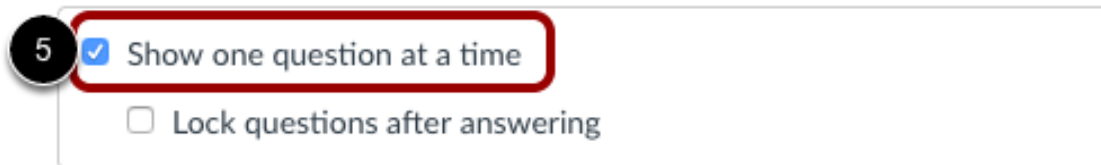
D - Lock Questions after Answering (Preventing Backtracking)

This option can be used when 'one question at a time' question presentation is enabled, prohibiting students from returning to previous questions.

This may be a useful feature where a quiz builds on earlier questions, i.e. where later questions may give away the correct answers for earlier questions.

However, preventing backtracking for examination purposes this feature can lead to extreme levels of anxiety. Students are unable to go back to previous questions and check their answers prior to submission. They may well have in place established techniques for undertaking exams that they cannot use, e.g. tackling easier questions first. Worst still, students are unable to return to a question even if they did not previously provide an answer.

So, for this reason we would not recommend using this feature unless there is a use case such as the above (one question building on another). In this case, students need to be informed and comfortable of how this will work in advance of the assessment.



Instruction for locking questions after answering in a Classic quiz: [What options can I set in a quiz](#)
Instruction for preventing backtracking in New Quizzes: [How do I manage settings for an assessment in New Quizzes?](#)

For further Information and Guidance

For getting started advice around using Canvas Quizzes for online exams including the best settings to choose please see our wider range of [resources](#) in this area. For more advice around designing quizzes inclusively please see out HAL support guide on [Inclusive Quizzes](#). If you require technical support, please use the Canvas Support available through the Help icon in Canvas. If you have any questions regarding the content of this document or for wider curriculum or assessment advice please email us at cie@liverpool.ac.uk

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