



MELBOURNE CSHE TEACHING AND LEARNING SHORT GUIDE SERIES

ASSESSMENT CONSIDERATIONS IN MOVING FROM CLOSED-BOOK TO OPEN-BOOK EXAMS

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Exams, regardless of format should allow for valid, reliable evidence of students' achievement of subject learning outcomes. For most disciplines and subjects, this can be achieved through an open-book exam format.

Open-book exams can have several educational benefits. If designed well, they discourage students from providing responses that focus on memorisation and rote learning of discrete facts or formulae. Well-designed open-book exams encourage application of knowledge, skills and conceptual understanding through more complex tasks. This engages higher-order skills and aligns well with the subject outcomes that anchor these skills within the discipline. By allowing students access to notes or texts, open-book exams can also better allow for students to be assessed using real-world scenarios as part of an exam. Depending on the time limit, open-book exams can replicate realistic professional workplace tasks that require information from various sources to be interpreted and synthesised.

While open-book exams are becoming more common practice in many disciplines, changing from closed-book to open-book exams requires careful consideration of examination design and assessment intentions.

This document provides advice on moving from in-place, closed-book examinations to open-book, remote assessment. It offers conceptual considerations, practical tips, and discusses the relative merits of two common approaches to open-book exams: those with strict time limits, and those with broad time limits ('take-home' exams).

Open-book exams with strict time limits (with or without ID verification)

Redesigning exam items should involve revisiting subject outcomes. Which outcomes are most important to assess through the exam? What are the best ways for students to demonstrate their achievement of these outcomes? Learning outcomes are as much about what students do with knowledge and skills as they are about the content of the subject.

For open-book exams, avoid examining outcomes that ask students to recall, recollect, recite or list. Instead, consider the learning outcomes that elicit deeper and more complex demonstrations of achievement. Build an open-book exam around questions that require students to *use and apply* the facts and information that they have learnt and have access to in their notes, textbooks or other available resources.

Examples of good practice when creating open-book exam items:

- > Ask students to solve a problem or complete a calculation and then explain their thinking or reasoning.
- > Present a short scenario and ask students to apply what they have learnt from the course (concepts, theories, principles) to either:
 - analyse the issues or problem presented
 - identify and explain what went wrong
 - evaluate the strengths and weaknesses of...
 - present solutions for the problem.
- > Present students with quantitative or qualitative data or a diagram and ask questions that assess students' ability to:
 - interpret the data or diagram and draw conclusions and give reasons for their conclusions, or
 - evaluate the quality of the data or facts as presented and analyse the possible effects or implications.
- > Ask students to create a plan for a particular scenario or situation or propose a solution to a problem.
- > Ask students to compare or contrast examples that are not readily available in textbooks or other sources.

Using or adapting MCQs

Given the reliance on multiple choice questions (MCQs) in many closed-book exams, it is reasonable to ask whether MCQs can or should be used in an open-book setting. A useful rule of thumb is that you should avoid using MCQs for assessing basic knowledge and factual recollection, but you can use MCQs to assess higher-order thinking skills including application of knowledge, detailed analysis and evaluation. If your current in-place examinations already use MCQs in this way, then you should consider using them for your open-book exam.

If you do not already have an item bank of MCQs that assess higher-order knowledge, skills and understanding, you should consider using alternative exam items to MCQs. Developing higher-order MCQs takes care and time, and benefits from pilot testing or trialling. Unless you are able to commit requisite time and resources to this process, it is prudent to consider using different types of assessment items in your open-book exam.

What, then, are your options if you are looking to transition from an exam that is heavily based on MCQs that assess students' ability to recall material or show their fact-based knowledge? One option is to select a subset of the most important MCQ questions and convert them into short, slightly more complex open-response items. This can be as simple as moving from asking students to select the correct response in MCQ format to asking for one or two sentences on why or how a particular answer is the correct response.

Keep in mind that short, open-response items take longer to mark than MCQs. As a result, it is important to select a manageable subset of items that are worthy of 'conversion' and prioritise them for inclusion in the exam according to the areas of content they cover and stated learning outcomes of the subject.

DO:

1. Let students know well in advance that the examination will be open-book and that they will be asked to address questions that will assess their understanding of the course content, not just recall facts. Make the corresponding learning outcomes known to students.
2. Work through with students a couple of practice exam questions that illustrate the kinds of knowledge and understanding you will be assessing.
3. Make sure that items are suitably challenging, and that the time allocated for the exam is realistic and manageable. Well-designed open-book questions will typically be more complex and require more time to answer than questions relying on recall, so it is a good idea to test the timing with a tutor or test it yourself. Your students will require more time than a member of your teaching team to answer questions, so allocate the exam time accordingly.
4. For questions requiring extensive responses, make format expectations clear to students. This may require you being explicit about whether it is reasonable for students to use bullet points or prose. It may also be useful to specify for students what the expected approximate word limit is for each question.
5. Consider that long, writing-heavy responses (e.g. essays) may disadvantage students who have English as a second language and others with recognised challenges in performing timed writing activities. It may be necessary to develop a plan that meets the needs of your students without compromising the security of the exam.

DON'T:

1. Assume students know what the expectations and purpose are for your open-book exam. Explain both clearly and ensure that you link the expectations of students to subject learning outcomes.
2. Make question prompts or scenarios overly long to read.
3. Set an unrealistic time limit for your students. Most students who have prepared well should be able to complete all the exam questions with time to spare.
4. Design questions that are easy to answer by quickly looking at notes or searching through other resources. Questions should assess students' understanding by requiring them *to do something* with the facts they know or the information they can access.

Open-book take-home exams with broad time limits

Take-home exams are used extensively in many disciplines and typically ask students to address sophisticated, complex or authentic real-world problems. Take-home exams are good for assessing learning outcomes related to analysing, synthesising and drawing connections between concepts, principles and ideas covered in the course. They are used in some disciplines to assess students' ability to logically and clearly present ideas in written form.

Examples of good practice for tasks and questions in take-home exams:

- > Ask students to interpret and analyse provided data to prepare a report.
- > An extended written task requiring students to organise and integrate information to analyse an issue or compare and contrast ideas and examples.
- > Ask students to critically reflect on an issue, a problem, a case or a scenario drawing on sources and materials, requiring deep analysis and evaluation, and referring to concepts and theories introduced in the subject.

- > Ask students to construct a strong, specific argument about an area covered in the subject using evidence from sources.
- > Ask students to solve a complex novel problem drawing on theories, concepts or formulae covered in the subject.
- > Ask students to develop an original solution or idea to address a complex problem or case drawing on key ideas and principles covered in the subject.

Tips for using take-home exams with broad time limits

DO:

1. Develop explicit criteria for assessing the exam and share these with students in advance. In particular, explain how writing skills will be assessed, your expectations in relation to written expression, and referencing – e.g. are they expected to use a particular referencing style?
2. Share with students an example of a take-home exam question and discuss what a ‘good’ response would look like.
3. Indicate to students the approximate word length or number of pages expected to address the question well.
4. Make clear the requirements in terms of using sources. Are they expected to go beyond course materials and readings?
5. Make clear the rules around students discussing the questions with peers and sharing ideas.

DON'T:

1. Set questions or tasks that require students to undertake a lot of ‘new,’ unfamiliar research into the literature. This may be appropriate for an assignment during the semester, but a take-home exam should be assessing what has been covered or learnt in the subject. Students should be able to address the questions or tasks in the exam by using their notes and subject materials.
2. Set a narrow task that converges to a correct answer, but rather set divergent tasks where students can take different approaches to demonstrate their understanding and learning. This will decrease the risk of plagiarism and collusion.
3. Set ‘open’ word limits, but rather set a tight word limit that is adequate and realistic for students to perform well within the time limit.

Pros and cons of the two approaches to open-book exams

Open-book exams	Benefits	Drawbacks
With strict time limits	<ul style="list-style-type: none"> • models a seated examination and therefore may provide a more familiar approach to examination. • an easier adaptation for subject teams using timed, seated examinations. • can reduce (but not eliminate) the opportunity for plagiarism, collusion or other forms of cheating (e.g. someone else taking the exam). 	<ul style="list-style-type: none"> • can be difficult to maintain exam security and may require additional steps like identity verification or a verification viva. These steps require additional planning, time and resources. • In an online environment, unforeseen technical difficulties can limit or prevent students' access to the exam and ability to submit during the examination time. • If students are in different time zones, requires consideration of exam security and logistics.
Take-home exam (broad time limits)	<ul style="list-style-type: none"> • allows for more complex, reflective responses. • can reflect realistic professional workplace tasks where employees are required to use and synthesise information from various sources to respond to a question or complete a task. • may accommodate many requirements (e.g. screen-readers) without requiring significant changes to the assessment task design. • allows for technical issues to be addressed without affecting the examination period. 	<ul style="list-style-type: none"> • represents a significant shift from seated, timed examinations and therefore requires more transitional preparation and thinking on the part of the subject team. • can raise concerns about plagiarism, collusion or cheating. • creates significant marking workload for academic staff in large cohorts.

Other considerations for implementing open-book exams

1. If your final exam is worth more than 60% of the total marks for the subject, consider reducing or redistributing the weighting of your exam. It is likely you will encounter some challenges the first time you are using an open-book examination strategy. Reducing the weighting of examinations will offset the impact of these concerns as you attempt, evaluate and adapt your strategies. Reducing or redistributing the exam weighting and developing some smaller-scale assessments that students engage with prior to the exam also has educational benefits by providing students with more opportunities to receive feedback on their learning before the final exam.
2. Assess the training, development and workload implications of your open-book examination plan for both staff and students. Keep in view any guidance your students may need in making the transition to an open-book examination.
3. Don't expect a perfect solution. Managing assessment change is a challenging process under the best of circumstances. Weigh the relative merits of different approaches, plan with your colleagues, attempt the best solution possible and then evaluate the outcomes.
4. Draw on the expertise and support at the University. Consult with teaching and learning experts within your Faculty or School or the Melbourne CSHE and seek assistance from Learning Environments for technical guidance and support in using online exams.

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