# Guide to online open-book exams

When creating online open-book exams we need to design questions that will both enable demonstration of learning and high standards of academic integrity.

As students will have access to a range of online and hard copy resources, the questions need to require demonstration of more than the ability to recall information. While we can never entirely eradicate cheating in assessment, the following guidelines support the writing of questions that minimise opportunities for cheating. The time constrained nature of the assessment will also contribute to reduce cheating.

Open-book exams mirror some work situations where professionals would be able to access information to inform decisions and actions. They can also reduce anxiety, poor learning approaches (e.g. cramming), and studies have shown they increase retention of learning. However, to benefit from this type of exam, students will need to be prepared both through teaching approaches that develop students' ability to apply and analyse, as well as through activities that allow the students to experience low-stakes versions of this assessment type.

This guide focuses on

- Writing questions for online open-book exams
- Preparing students for success

If further support is needed to create the exam in MyUni, please contact myunisupport@adelaide.edu.au or your Faculty Learning Designer through the booking system.

Further guidelines and resources are available at:
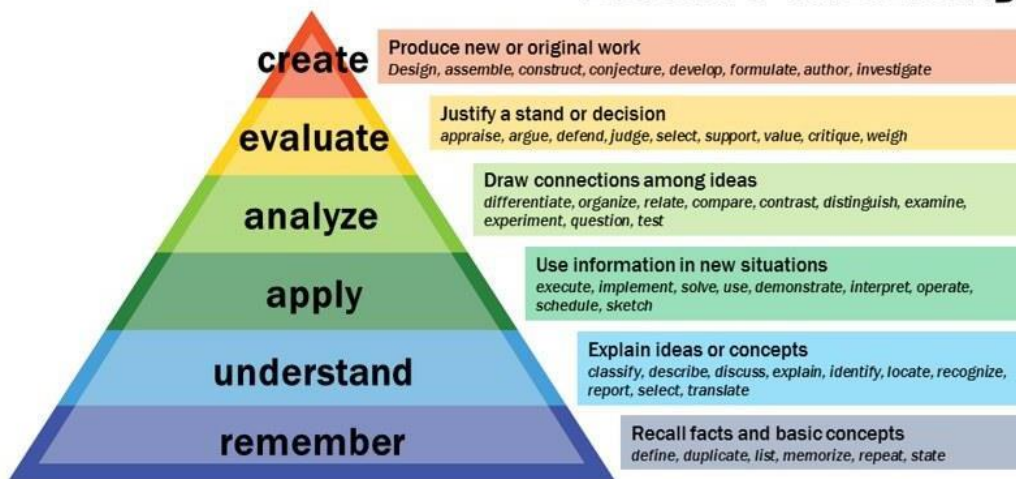https://www.adelaide.edu.au/learning/resources-for-educators/online-exams

# Writing online open-book exam questions

## 1. Focus on alignment to course learning outcomes.

The learning outcomes that the exam aligns to will guide the design of questions. You will need to determine what type of question effectively measures the expected learning. If a learning outcome expects that students will be able to apply a certain theory, for example, the questions could ask for a theory to be applied to a specific context. Since students have access to information, the questions should ask them to do something beyond summarise information, for example use critical reasoning skills to respond to a case or scenario (see Bloom's Taxonomy for appropriate higher-order thinking levels). Asking students to classify or compare information will raise the response above knowledge recall if the higher-order levels are not appropriate for your course.



**Bloom's Taxonomy**

**create** — Produce new or original work
*Design, assemble, construct, conjecture, develop, formulate, author, investigate*

**evaluate** — Justify a stand or decision
*appraise, argue, defend, judge, select, support, value, critique, weigh*

**analyze** — Draw connections among ideas
*differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test*

**apply** — Use information in new situations
*execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch*

**understand** — Explain ideas or concepts
*classify, describe, discuss, explain, identify, locate, recognize, report, select, translate*

**remember** — Recall facts and basic concepts
*define, duplicate, list, memorize, repeat, state*

Vanderbilt University Center for Teaching

## 2. Use questions with multiple steps or broad scope.

Questions that build sequentially can enable the demonstration of higher-order thinking. Also, questions that require students to integrate content from across the course curriculum would provide an appropriate level of challenge. Ensure the questions are not too generic otherwise students will be able to get an answer online too quickly. As a check, put parts of your question into Google to see what it finds.

### 3. Situate questions in authentic situations and the student as 'expert advisor'.

Questions that ask students to draw on information in order to respond in critical or innovative ways to real-world circumstances, issues or challenges are appropriate for open-book exams. An approach to creating a scenario to which students will respond in the role of expert is outlined in this article based on experience in a Business school.

### 4. Write questions that will require students to demonstrate insight and an evidence-base.

To respond to your questions, students should need to formulate their own explanations, examples or arguments and apply concepts or theories to contexts not discussed in class. Questions should ask students to explain the how and why behind their answer (e.g. not only the calculation). They could also be asked to interpret data, evaluate concepts and theories, expand on ideas, or discuss limitations. Ask students to include citation of relevant academic support.

This resource from the University of Newcastle provides very practical advice on writing questions for open-book exams. It includes Socratic question examples and question types that enable higher-order thinking.

### 5. Keep questions clear and straightforward.

The challenge for students should be in demonstrating their understanding, not in trying to decipher what the question is asking. Practice writing the response yourself to see how long it takes and make sure you are allowing sufficient time for each question to be responded to in the required depth and quality.

### 6. Write clear assessment criteria that align with the learning outcomes.

To confirm that the questions are constructively aligned and to aid with inter-marker reliability, create assessment criteria that are shared with students. You might want to create simple rubrics like these examples from The Hong Kong Polytechnic University.

## Preparing students for success in online open-book exams

- Explain the purpose and benefits of open-book exams. As a form of assessment, open-book exams have a number of benefits for students, so although the current circumstances require the use of this assessment type, students should still understand these exams are a valid way to demonstrate their learning. Explain the type of learning they will be expected to demonstrate so they are clear that this is not an 'easier' option.

- Be open about academic integrity concerns with students. Explain that the exams are being designed to enable them to demonstrate high standards of academic integrity and that steps will be taken to improve assessment security. As well as deterring some students, this will reassure others. Explain the need to use the resources appropriately through paraphrasing and acknowledgement of sources (although a full reference list may not be required).

- Provide formative opportunities for the students to experience the question types as well as to become familiar with using MyUni for exams. Students can mark and provide feedback on their peers' responses to sample questions based on the assessment criteria or rubric. This will help them understand the expectations.

- Consider ways to provide guidance and/or feedback on students' preparation techniques and material. Students should be customising their notes and materials for efficient retrieval of useful information and would benefit from the opportunity to share these with peers and receive feedback. Additional sessions in Week 13 could focus on this.

- Provide guidance on expectations in terms of time spent on different questions through weighting or word limits. Explain that the expectation is they will write less than usual exams because they need to spend time looking for information and crafting an insightful, well-supported response.

- Remind students of learning outcomes so that they focus on demonstrating these and don't get side-tracked by irrelevant details in cases or questions. Make sure they understand that even though they have access to resources, thorough preparation is still required. They also need to be careful not to underestimate how long it takes to find the support material they need.

- Make it clear that they won't receive partial credit for merely reproducing information that was available to them in the reference material. Explain that their marks will come from how their responses go beyond what can be found online or in a textbook.

- Make time to discuss techniques for maintaining their wellbeing in the lead up and during the exam.

See further guidance on supporting students at: https://www.adelaide.edu.au/learning/resources-for-educators/online-exams#supporting-students-to-prepare-for-their-online-exam

FAQs for students on online exams are available here: https://www.adelaide.edu.au/covid-19/student-information/assessment-and-grades

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- Definitions of online open book exams/benefits/plagiarism/top tips from Bristol University: http://www.bristol.ac.uk/bilt/resources/coronavirus-guidance/
- UTS blog on open book exams provides links to detail on designing for higher order thinking: https://lx.uts.edu.au/blog/2018/02/13/design-open-book-exam/

- Good Practice Guide in Question and Test Design: PASS-IT Project for Preparing Assessments in Scotland using IT.