

# QUALITIES OF A GOOD EXAM

A guide for all educators



Curated by



Are you constantly looking for ways to craft better assessments for your students? The qualities of a good exam are as follows, according to research:

**A good exam gives all students an equal opportunity to fully demonstrate their learning.** With this in mind, you might reflect on the nature and parameters of your exam. For example, could the exam be administered as a take-home exam? Two students might know the material equally well, but one of them might not perform well under the pressure of a timed or in-class testing situation. In such a case, what is it that you really want to assess: how well each student knows the material or how well each performs under pressure? Likewise, it might be appropriate to allow students to bring memory aids to an exam. Again, what is it that you want to assess: their ability to memorise a formula or their ability to use and apply a formula?

- **Consistency.** If you give the same exam twice to the same students, they should get a similar grade each time.
- **Validity.** Make sure your questions address what you want to evaluate.
- **Realistic expectations.** Your exam should contain questions that match the average student's ability level. It should also be possible to respond to all questions in the time allowed. To check the exam, ask a teaching assistant to take the test if they can't complete it in well under the time permitted then the exam needs to be revised.
- **Uses multiple question types.** Different students are better at different types of questions. In order to allow all students to demonstrate their abilities, exams should include a variety of types of questions.

- **Offer multiple ways to obtain full marks.** Exams can be highly stressful and artificial ways to demonstrate knowledge. In recognition of this, you may want to provide questions that allow multiple ways to obtain full marks. For example, ask students to list five of the seven benefits of multiple-choice questions.
- **Free of bias.** Your students will differ in many ways including language proficiency, socio-economic background, physical disabilities, etc. When constructing an exam, you should keep student differences in mind to watch for ways that the exams could create obstacles for some students. For example, the use of colloquial language could create difficulties for students whose first language is not English, and examples easily understood by North American students may be inaccessible to international students.
- **Redeemable.** An exam does not need to be the sole opportunity to obtain marks. Assignments and midterms allow students to practice answering your types of questions and adapt to your expectations.
- **Demanding.** An exam that is too easy does not accurately measure students' understanding of the material.
- **Transparent marking criteria.** Students should know what is expected of them. They should be able to identify the characteristics of a satisfactory answer and understand the relative importance of those characteristics. This can be achieved in many ways; you can provide feedback on assignments, describe your expectations in class, or post model solutions.

- **Timely.** Spread exams out over the semester. Giving two exams one week apart doesn't give students adequate time to receive and respond to the feedback provided by the first exam. When possible, plan the exams to fit logically within the flow of the course material. It might be helpful to place tests at the end of important learning units rather than simply give a midterm halfway through the semester.
- **Accessible.** For students with disabilities, exams must be amenable to adaptive technologies such as screen-readers or screen magnifiers. Exams that have visual content, such as charts, maps, and illustrations, may need to be rendered into a format that meets an accommodation.

## **After the exam is ready**

### **Prepare a marking scheme or rubric**

Preparing a marking scheme ahead of time will allow you to review your questions, to verify that they are really testing the material you want to test, and to think about possible alternative answers that might come up.

- **Look at what others have done.** Chances are that you are not the only person who teaches this course. Look at how others choose to assign grades.
- **Make a marking scheme usable by non-experts.** Write a model answer and use this as the basis for a marking scheme usable by non-experts. This ensures that your teaching assistants and your students can easily understand your marking scheme. It also allows you to have an external examiner mark the response, if need be. A rubric can be an effective tool to help you or your teaching assistants assess student work quickly and accurately. Sharing the rubric with your students as they begin to study for the exam is also a good idea.

- **Give consequential marks.** Generally, marking schemes should not penalize the same error repeatedly. If an error is made early but carried through the answer, you should only penalize it once if the rest of the response is sound.
- **Review the marking scheme after the exam.** Once the exam has been written, read a few answers and review your key. You may sometimes find that students have interpreted your question in a way that is different from what you had intended. Students may come up with excellent answers that may be slightly outside of what was asked. Consider giving these students partial marks.
- **When marking, make notes on exams.** These notes should make it clear why you gave a particular mark. If exams are returned to the students, your notes will help them understand their mistakes and correct them. They will also help you should students want to review their exam long after it has been given, or if they appeal their grade.

### **Inform students of the purpose and parameters of the exam**

- Clearly communicate with students about your goals for any test or exam. Don't assume that students know what the pedagogical purpose of the test or exam is. Discuss your goals and desired outcomes, and help students understand how specific aspects of the test or exam fit these goals. Be open to making some changes if students have ideas to offer.
- Point out the important sections in course plans, textbooks, and readings to guide test and exam preparation; where possible, provide multiple samples of tests and exam questions and answers. Consider conducting an exam review exercise.

- Although you might not provide students with exam questions in advance, you should be prepared to answer questions such as:
  - What will the exam cover?
  - How much emphasis should I put on the textbook / lectures / etc...?
  - What material (if any) am I allowed to bring into the exam room?
  - When will I get my mark?
  - What happens if, for a good reason, I can't attend the exam? Do I get to re-write?
  - Will I be given the chance to choose the topics on which I do questions?
  - Will I be told which criteria I am being assessed on?
  - If I disagree politically or philosophically with the marker, will I get poor marks?
  - Will allowances be made if English is not my first language?

### **After your students write the exam**

#### **Monitor the quality of your exams**

Exams provide you with the opportunity to obtain feedback on student learning, your teaching methods, and the quality of the exam itself.

- **Write impressions on your exam and keep them.** During the exam and the marking of the exam, keep track of which questions seem to be well understood, and which questions were frequently misunderstood.
  
- **Collect numerical data.** If you have machine-scorable exams, you can get statistics on your questions, such as which questions were missed most often or which distracters were most often chosen. In other cases you can collect an overview of the marks.

- **Get student feedback.** You can leave space specifically for feedback on exams, or you can obtain feedback in class after the exam. Consider asking your students to complete an exam wrapper – a short survey asking students about exam preparation strategies they used, what questions they found difficult to answer, and what they might do differently to prepare for the next exam.

### **Reflect on the gathered information**

Reviewing examination results can help you identify concepts and methods that students are having difficulty with questions that were missed as well as concepts and methods that were well understood questions generally successfully answered. Or it may highlight well-constructed or poorly constructed exam question. Consider using this information to:

- Change how you teach the remainder of the term
- Check for improvement on specific topics or methods over a term
- Redesign the course or the examination for future classes
- Assess your teaching practice – what is working especially well and what can be improved upon.

Source:

*Preparing Tests and Exams. Centre for Teaching Excellence, University of Waterloo.*