

ENhance QUICK GUIDE

Alternatives to traditional exams

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What's the problem?

Written exams have been around in universities ever since 1791 when first used in England by Cambridge University. They have developed into one of the most common forms of assessment all the way from secondary education to degree-level and beyond, but while they have benefits, they also have downsides. Many argue that they're good regarding 'veracity' (we are reasonably sure that what is assessed is the work of the candidate), they are relatively economical to conduct and manage, and they are fair since each candidate has the same opportunities. It's also true that many employers regard exam results as easy to use when selecting candidates for interview. Traditionalists argue that performing under the time-constrained pressure of exams provides a good indicator of vital strengths of candidates.

However, they remain a snapshot of what a candidate can do at a set time, over a limited defined timescale, at a particular place, and attempting specific defined questions and factors such as legibility and speed of handwriting are known to influence marks. We recognise that candidates' performance can be damaged by stress and anxiety and Race (2014, 2015) argues they only measure a limited range of abilities, and can rarely be regarded as authentic measures of what students can really achieve. Essay-style exam questions are widespread but in them an excellent answer may only score 70% whereas in other formats a completely correct solution to a problem may score 100%, leading to problems of comparison between subject area marks. Where exams involve candidates selecting just a few questions from a range, mastery of a subject is only partially tested.

There are practical issues too: exams are often bunched towards the end of a programme leading to congested revision under pressure, and with large cohorts marking exam scripts can take a great deal of time and energy, under intense pressure prior to exam boards. Gaining inter-assessor reliability is impossible without good moderation of the comparative standards, which can be complex and time consuming.

Many see exams as a game and candidates who effectively master it are advantaged, and students from disadvantaged backgrounds tend to be disproportionately affected in gaming the system.

So, if we are to use them, we need to consider how we use traditional examination slots to make them manageable and useful for students and staff, both by getting candidates to do different things in such slots and using significantly different forms of exams altogether.

What can we do to make unseen time-constrained exams work better?

We can:

1. Use a range of short-answer questions for some or all of the exam. This can have the benefit of reducing the deleterious effects of legibility and speed of handwriting. This can also help to ensure that each of the intended learning outcomes is seen to be

addressed by the whole picture of assessment, as with short-answer questions quite large areas of a syllabus can be covered in a relatively short time.

2. Use well-piloted, carefully constructed multiple-choice questions for part or all of an exam. This can involve candidates in a significant amount of decision-making, and test their knowledge of quite broad curriculum areas in a relatively short time.
3. Include multiple-response questions, which are multiple-choice ones where more than one option is correct, asking candidates to choose 'which (one or more) of the following are correct choices?'. This kind of question can cause candidates to need to think 'deeper' than when just choosing the best option from a list (which is sometimes too easy to 'spot' without much thought).
4. Use 'visual' questions, where (for example) candidates are provided with a graph or diagram, and asked to insert letters or numbers where particular features are evidenced (for example anomalies in cardiology data linked to particular symptoms).
5. Minimise the use of questions requiring essay-type answers.

The whole of an exam may be composed of various types of short-answer question, all of which are compulsory. Alternatively, just part of the exam could be of this sort, with the remainder offering candidates to choose 'x' out of 'y' relatively traditional exam questions (solving problems, and so on). It is then important to give clear instructions how much time should be spent on each part, and how the available marks are split up.

What different forms of exams can we use?

1. **Open-book exams** where candidates are provided with texts or journal articles, or even allowed to bring in reference materials of their own choice. This can save candidates from having their memory tested so much, and focus on their abilities to interpret existing sources and choose extracts to discuss or critique in their answers. The advantages include reducing the emphasis on memory recall. A disadvantage can occur if different candidates have different resources to use.
2. **Open-notes exams** where candidates are allowed to bring in with them a limited quantity of prepared material – handwritten or word-processed – to assist them in answering the exam questions. It could be regarded as a 'licensed crib notes' situation. Advantages include reducing the significance of memory and the associated stress, and also that preparing the open-notes can in itself be a worthwhile learning experience. Disadvantages include the fact that some candidates might err on the side of bringing in far too much original material, without having processed it in a way that lends itself to helping them to answer the exam questions.
3. **'In-tray' exams** can take the form of exams where candidates are already provided with factual detail about a scenario (for example, the staffing and facilities of a hospital ward, or a business portfolio) and are given time to familiarise themselves with the information provided. Then at set times during the exam, they are given a slip of paper outlining an incident (for example, incoming casualties after an accident, or a sudden change in value of a currency), and asked to make specific decisions on the best courses of action to address the situation. Advantages include that such exams can be high on 'authenticity' – simulating real-world situations quite directly, and can be quick

and relatively straightforward to assess. A disadvantage is that this kind of exam can take considerable time to set up in the first place, and it is necessary to have done at least some piloting to ensure that the questions really probe candidates' understanding of the gist of the information they were provided with.

4. **Takeaway exams** can be where candidates are given a question paper or task to take out of the exam room, and asked to submit their answers at a later time in the same day (or beyond). Such exams can have the advantage of simulating real-world situations, where people are allowed to use resource materials and talk to other people when solving problems. Although such exams may still be time-constrained, candidates can work in an environment less artificial than a silent, crowded room. The obvious disadvantage is that there can be uncertainty about 'veracity' – i.e. who exactly solved the problems or came up with the submitted answers.
5. **Mobile-enabled exams** can be exams where candidates are allowed access to their mobile phones and all resources they can access using these. These have the advantage that they are much more authentic than traditional exams. A disadvantage is the extra time it can take to think up the right kinds of exam questions for this situation. Also, the ability to communicate with other candidates or people outside the exam room can not be discounted.
6. **Computer-based exams** already exist in many disciplines, and can have the advantage of allowing candidates to use keyboards to enter their answers, rather than pens. A disadvantage can be that keyboard and typing skills may be tested alongside subject knowledge, but most candidates are likely to be quicker with a keyboard than a pen nowadays. If the computers are also linked to the internet, the authenticity of the exam is further enhanced in that it resembles real-world situations, but as before, the veracity of the answers to the exam questions can be compromised.
7. **OSCEs**, Objective structured clinical examinations, are widely used in medical education and health care studies, and lend themselves to many other disciplines where authenticity is vital and practical doing is important in the intended learning outcomes. Essentially, OSCEs are exams where each candidate does something at each of a number of assessment stations located around the exam room. In medicine, for example, candidates may visit successive stations and perform a series of assessed tasks, such as:
 - interpreting some X-rays
 - looking through a set of notes on a patient and approaching a diagnosis
 - prescribing medication for a given condition in a given context
 - briefing a ward sister about the pre-operative preparation of a patient
 - talking to a patient to diagnose a condition (though in practice the 'patient' is an actor, as it is hard to get real patients to tell the same story to successive doctors).
8. **Oral exams** are normally face-to-face occasions, where a candidate is quizzed by one or more examiners. Joughin (2010) has elaborated on the benefits of oral exams in some detail, and the way that they can reach dimensions of understanding completely missed by written exams. The advantages include the possibility of using probing

questions to test understanding, and on both sides the use of tone of voice, gesture, facial expression and normal human interaction to clarify questions and answers. Disadvantages include the time taken to run a series of oral exams, and the difficulty in ensuring that successive oral exams are conducted at about the same standard. A further disadvantage is that some candidates can be overly-stressed by the face-to-face situation and not do themselves justice because of this.

Key takeaways

Traditional exams are likely to be with us for some time, so we need to find ways to use the opportunity to make assessment more productive. To achieve this, we need to think carefully about the purposes of both the exam occasion and the formats we use, and give our students tasks to undertake within them that add value rather than simply stressing and exhausting assessors and students.

References

- Joughin, G. (2010). *A short guide to oral assessment*. Leeds: Leeds Met Press.
Race, P. (2014). *Making learning happen*. London: Sage.
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