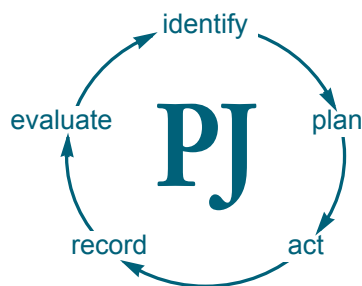


EFFECTIVE USE OF ASSESSMENT METHODS

By Yvonne Perrie, PhD, MRPharmS

The end of the academic year presents a good opportunity for university tutors to think about their assessment strategies. This article looks at the core values of an effective assessment. It suggests different assessment methods that can be used while attempting to maintain a manageable workload for both students and assessors



identify gaps in your knowledge

1. List three characteristics of effective assessment.
2. Describe two forms of assessment that can be used as an alternative to a standard essay.
3. How can assessment methods be streamlined?

Before reading on, think about how this article may help you to do your job better.

The Royal Pharmaceutical Society's areas of competence for pharmacists are listed in "Plan and record," (available at: www.rpsgb.org.uk/education). However, a list for pharmacists in academia has not yet been published. This article relates to "assessment and giving feedback to learners," an area of professional activity listed in the framework for the Institute for Learning and Teaching in Higher Education's CPD pilot project (www.ilt.ac.uk).

The outcome of assessments can be pivotal. Generally, assessment performance dictates progression through a degree course and the class of degree achieved which in turn will influence future employers. It is therefore vital that tutors ensure that each assessment is fair, transparent and valid. However, the people who set assessments are usually those who were good at them at university and this can affect how different methods are judged.

PANEL 1: CHARACTERISTICS OF AN EFFECTIVE ASSESSMENT

Valid The assessment should measure what is intended. For example, to assess practical ability, it should look at how the results were obtained in addition to the results themselves.

Reliable and consistent Assessment criteria and marking schemes should be robust so that grades are consistent when more than one assessor marks the work or when one assessor marks the work on different occasions.

Transparent The assessment should be clearly aimed at meeting the learning objectives for the topic.

Fair All students should have the same opportunity to succeed.

Efficient and manageable Deadlines for course work should be staggered across modules and not just within one module to make assessments manageable for both students and the tutor. The assessment should be streamlined to ease the burden of marking and giving feedback.

Effective feedback Students should always be given advice on their progress and have the opportunity to learn from their mistakes.

For tutors, the key components of the assessment process are design, support, marking and feedback. Assessment is not only a means of differentiating between students, but it should also provide a learning opportunity for them. To continue to assess and provide feedback for the various aspects of student's skills, knowledge and performance while maintaining appropriate workloads despite increasing student numbers, assessment strategies need continued adaptation and development. As a framework for refinement, the Quality Assurance Agency for Higher Education (QAA) has published a code of practice,¹ which identifies characteristics of a good assessment. These are summarised in Panel 1.

ALTERNATIVES TO TRADITIONAL ASSESSMENTS

Despite there being a wide variety of strategies for assessing students, essays, reports and traditional time-constrained examinations make up more than 80 per cent of assessments in the United Kingdom.² These may not always be the most appropriate assessments to use. Several concerns arise when considering the merits of traditional examinations and Phil Race, emeritus professor at the University of Glamorgan, points out that time-constrained, closed-book, examinations are at odds with two of the most important factors underpinning successful learning: practice and feedback.³

A recent study at the School of Pharmacy, University of London, aimed to enhance the learning value of this kind of examination by inviting first, second and third year pharmacy students to collect annotated marked scripts.³ After one month, only 63 per cent of third year scripts were collected. However, response from the first and second years was better, with 94 per cent and 84 per cent of scripts being collected, respectively. Student response to the initiative suggested that feedback on a past examination was perceived as little use for

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future examinations and this resulted in low attendance at scheduled post-examination review sessions. As the author noted, the educational aim of this initiative was only partly met and was dependent on student motivation to take advantage of this feedback. Despite their associated problems, traditional examinations remain the most time and cost efficient method of assessment, and are an effective deterrent to plagiarism compared with other assessment strategies.

Alternatively, continuous assessment (eg, writing a number of essays over the year) is not without limitations. Grading coursework and providing effective feedback to a large group can be time consuming. Further, students with skills associated with one assessment format can be repeatedly rewarded with high marks and potentially weak areas such as subject matter understanding can be masked. On the positive side, continuous assessment and coursework provide an excellent opportunity to provide feedback and promote learning. Unfortunately this feedback is often eclipsed by the grade attributed to the work — it can be seen as retrospective and therefore disregarded. Moreover, delays in giving feedback may mean students have already moved on to a new topic.

However, probably the major problem that can undermine the value of coursework is the difficulty in detecting unwanted collaboration or plagiarism. Combining these problems with the requirement to address continually the needs of large and diverse student groups have spurred a wider range of assessment tools to be developed.

Different students have different skills so using a variety of assessment methods ensures that no group is advantaged or disadvantaged, as recommended by the QAA code of practice. Further, some methods are more appropriate than others for assessing a particular learning aspect. Alternative options to traditional assessments include open-book or open-note examinations, case studies and simulations.²

Open-book examinations, case studies and simulations The advantage of open book examinations is that instead of relying on a student's recall of facts and formulae, they measure how well students can use resources and apply the information found in them. Similarly, students could use preprepared crib notes. This has the same advantages as an open book examination, but students can also learn from preparing the notes in the first place. For this method to be effective, guidelines for what constitutes acceptable notes should be in place and as a control, notes can be retained by the assessors on completion of the examination. Alternatively, case-studies and simulations of realistic scenarios can provide a student with an opportunity to demonstrate his or her ability to answer questions, resolve problems and perform tasks competently, according to changing circumstances and within a set time.

Essay plans and annotated bibliographies Alternatives to traditional essays include essay plans and annotated bibliographies. Writing a

plan for an essay rather than a full essay is particularly useful at the start of a course because it can help with the foundation skills needed for essay writing later in the course. Moreover, essay plans allow a student's preparation, planning and breadth of reading on designated topics to be demonstrated. Essay plans can also be useful for reducing marking time and prompting formative feedback. Alternatively, students can be asked to prepare an annotated bibliography (to an agreed referencing convention) on a designated topic. Each reference is then annotated with a short evaluation. As in a review, students collate and evaluate information resources on a given subject area and reduce the information into a convenient body of notes and references. Annotated bibliographies have the advantage that they can be assessed faster than essays and are generally less susceptible to plagiarism.

More creative methods Students could be asked to write an article suitable for a specified publication and audience, eg, a newspaper or a journal. This will again require a review of available information and its translation into an appropriate format. Producing such articles can be equally, if not more, challenging than a traditional essay but this format can circumvent plagiarism, especially if the students are initially provided with a selection of research or clinical papers to read and prioritise.

Another method of assessment is to ask students to write questions and assess their ability to produce a number of questions for a topic. This can be an effective way for students to see quickly what they do and do not know about a topic. An added advantage is that questions can be collated to form a question bank, which can be used as a learning tool for the group. Getting groups of students to produce learning material is a novel, yet effective indicator of knowledge and understanding. Students can be asked to prepare a learning package for the year below on a specified topic using alternatives to normal text submissions such as audio, video or even virtual learning packages.⁴

Practical work and projects Relating theory to practice using practical work is a key component of the pharmacy course and poster presentations are a useful way of assessing this facet. Individuals or groups can be asked to prepare and present their research results or work in a poster that can be assessed on the spot.

This type of assessment can help students develop their communication skills (eg, public speaking and presenting data). In addition, peer assessment can be easily used. Peer assessment is not a means of reducing an assessor's workload. Indeed, it can take significant time and organisation to develop and co-ordinate the process. Nevertheless, peer assessment can help students understand how assessment works and they often gain a clearer idea of what is expected from them. Critically reviewing another person's work is one of the best ways to develop and deepen understanding of a subject and it allows students to learn from each other's successes and mistakes.⁵ To take full advantage of self assessment as a learning tool it is best to let the students develop their own assessment criteria. This helps students apply criteria more objectively than when applying a tutor's criteria and decreases the problem of non-objective high marking that can plague some peer review processes.

Portfolios Building a case of evidence for achievement is becoming a more common process within the workplace and academia. Typically, the portfolio is a compilation of supporting evidence that includes pieces of work, tutor feedback, peer review and self-reflective analysis.

Portfolios can give more insight into a student's learning. The evidence submitted generally reflects a wide range of skills and attributes, and development and progress are documented. Further, how a student learns from feedback can be clearly demonstrated and this is particularly pertinent in the workplace and for new graduates. However, portfolios are not without disadvantages. They can take a lot of time to assess and can be difficult to mark objectively due to their individual nature. To overcome this problem, Race⁴ suggests that portfolio assessment criteria should be given in a generic way (eg, demonstrates a commitment to work with and learn from colleagues), leaving room for topic specific assessment. A check list where achievements of each learning outcome can be ticked off, can be useful. When designing and assessing portfolios it is vital that the

action: practice points

1. Identify one area of an assessment that could be streamlined and create a streamlining tool for it.
2. Visit the QAA site (www.qaa.ac.uk) and read section 6 of the code of practice
3. Try out and evaluate (eg, get feedback from your students) a new method of assessment.

evaluate

To be presented as CPD, you need to evaluate your reading and any other activities. Answer the following three questions:

- What have you learnt?
- How has it added value to your practice (eg, have you applied this learning or had any feedback?)
- What will you do now and how will this be achieved?

level of work expected from the student is outlined and the learning outcomes are clearly recognised from the outset.

STREAMLINING THE ASSESSMENT PROCESS

Although assessments are important, they can be time-consuming and onerous. Probably the most efficient way to save time is by careful consideration of word limits. Further, using one of the assessment methods discussed in this article (eg, essay plans) can cut down considerably on marking time while assessing the same outcomes as those in a full essay.

There are various other ways to reduce the time cost of assessing; the most common method is to use an assessment return sheet. Normally, these will contain sections that identify the student, the tutor and the assessment criteria. On the form, assessors can circle indicators of marks (eg, excellent, good, acceptable, poor) or provide a mark breakdown. Inclusion of a section that provides brief but concise feedback is also valuable. Self or peer evaluation can easily be incorporated into this process by providing students with similar self-assessment or peer-assessment return sheets. By comparing the student's view with the tutor's, areas where further direction and feedback are required are easily identified.

Statement banks can be effective at dealing with commonly arising issues and frequent feedback comments. To prepare a statement bank, a numbered list of regularly offered assessor comments is prepared and distributed to the students. This can be beneficial in two respects. First, effective feedback can be given in a more time-efficient manner by simply adding the relevant number next to the text or section where the comment applies. Second, the statement bank can be given to the students before the assessment, thereby raising the awareness of common problems. Alternatively feedback statements can be collated on overheads and presented to the class as a group.

Model answers present another streamlining method. A worked example provides the opportunity for students to compare their work with the model. This can reduce the time to give effective feedback by relating it to the particular areas of the model. Information technology support can also be an excellent streamlining tool. Computer-assisted assessment in the form of multiple-choice

questions can effectively reduce the marking burden and provide effective and instant feedback to students.⁴

CONCLUSIONS

With increasing student diversity and numbers, tutors must aim to continue to assess students' various skills, knowledge and performance in a manner that is fair, transparent, reliable and efficient. The suggestions offered here and in related sources^{2,5,6} offer some alternative assessment methods to those commonly used. Each of these methods has associated merits and limitations, but by developing a synergistic assessment system, an effective assessment strategy can be maintained.

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