

Assessing large classes

After a decade of rapid expansion in Australian higher education, student numbers have grown considerably in many courses and subjects, especially at the undergraduate level.

Larger class sizes pose significant teaching challenges, not least in the assessment of student learning. Perhaps most troubling, large classes may limit the amount of feedback provided to students.

In response to the pressures and challenges of assessing larger groups of students, academic staff are responding through:

- greater attention to the communication of clear assessment criteria to students;
- the development and use of marking guides to be used by teaching and assessing teams;
- the increasing use of various forms of exemplars to guide student efforts — as well as to guide marking and grading — including the modelling of discipline-based thinking, writing and performance; and
- the continuous refinement and dissemination of assessment policy and practice in relation to large student groups.

The issue of workload is central in any decisions about assessment of large classes for it is a serious one for students and staff alike. Staff teaching large student groups invariably undertake an informal, qualitative weighing-up of the efficiency of assessment tasks *vis-à-vis* their educational effectiveness.

There is little doubt that establishing an effective assessment program — developing criteria, guides, exemplars and models; discussing and refining them and communicating them to students and other staff — will have an initial negative impact on workload for staff with coordinating responsibilities.

However, this preparatory work is likely to lead to three gains. The first is a reduction in the time required for marking due to a higher quality of student submission. The second is a resolution of some of the potential issues likely when many staff are involved in marking and grading, through a streamlining of marking and grading practices. Finally, the availability of clear, transparent criteria and examples of work will contribute positively to the overall quality of teaching and learning.

Five assessment challenges created by large classes

The assessment of large student cohorts presents five distinct though interrelated challenges:

- 1) Avoiding assessment that encourages shallow learning
- 2) Providing high quality, individual feedback
- 3) Fairly assessing a diverse mix of students
- 4) Managing the volume of marking and coordinating the staff involved in marking
- 5) Avoiding plagiarism

In an effort to manage these challenges, academic staff have increasingly turned to group and on-line assessment. Carefully planned and managed group work does appear to help address many of the assessment challenges listed above. (Detailed information about creating effective group work and group assessment is in the section Assessing group activities).

Similarly, the use of appropriate on-line assessment can also help address some of the challenges of assessing large classes (for example, multiple-choice and/or short answer questions which can be automatically marked can provide feedback to students that is otherwise not possible). On-line assessment is also likely to assist, to some extent, in managing a diverse mix of students and the time required for marking. However, on-line assessment may not necessarily avoid the problems of low-level learning or plagiarism. (A more extended discussion of these issues is in the section On-line assessment).

Ultimately, however, while group and on-line assessment have much to offer in dealing with the challenges of assessing large classes, neither is a panacea for all the issues inherent in assessing large classes.

1. Avoiding assessment that encourages shallow learning

There is little doubt that growing class sizes encourage academic staff to focus on time-efficient assessment techniques. One unwelcome consequence of a focus on efficiency would be any tendency toward assessing learning at the lower levels of intellectual complexity; that is, assessment tasks that merely reward superficial, shallow or reproductive approaches to learning and that fail to direct students into the type of study that leads to the higher-order learning objectives of university education. Assessment methods demanding less complex analysis and synthesis than in the past, or demanding less rich forms of student response, may significantly diminish the quality of learning in higher education.

Attempts to assess large numbers of students in time-efficient ways may have resulted in approaches to assessment that might not be educationally desirable. For example, in some disciplines there appears to be a growing reliance on exam-based assessment with large classes, with an increased use of multiple-choice and short-answer or “tick-a-box” questions.

Of course, well-developed written examinations can provide a high level of validity and reliability in measurement of some types of learning. However, academic staff need to judge the appropriate proportion of assessment that should be conducted through this method alone. The efficiencies of assessing learning through exams, particularly if the marking is routine or automated, are counterbalanced by the limitations of a single method of assessment, particularly one that might not encourage the development of the full range of higher-order cognitive skills. Even at their best, many students find examinations as a sole assessment method impersonal, particularly in first year.

Another response to the pressures of larger classes, often in disciplines where examinations are less commonly used, is to lower the word-length requirements on written assignments. One staff member has commented about this tendency that it is “a distinct disadvantage to students, especially those going on to write 100 000 word postgraduate theses”.

As with many complex issues, there are no simple answers to these and other challenges in assessing large classes. Awareness of the limitations — and possible negative consequences for the quality of student learning — of particular approaches to assessment tasks is crucial, as this is likely to guide assessment-related decisions toward compromises that reflect both efficiency and educational effectiveness. The employment of less frequent and where possible, cumulative summative tasks with more formative feedback that guides student efforts on the next task might be useful in some circumstances.

2. Providing high quality, individual feedback that guides student learning

Timely, individual feedback is central to guiding learning. But to provide such feedback to hundreds of students simultaneously within a timeframe that ensures such feedback can be incorporated into student learning is a daunting prospect.

Students appreciate detail in the feedback they receive to identify weaknesses and to understand how they might improve future efforts. The structure of the overall assessment regime is therefore critical. If feedback is given on an early assessment task but later assessment tasks within the same subject offer little or no opportunity to incorporate learning from this feedback, students are likely to feel disadvantaged. Timing of feedback is also critical. There is little point, from a student point of view, in receiving feedback at the end of a subject when there may be no opportunity to apply the improved understanding.

One approach to providing feedback for large students groups is to use on-line assessment item banks with marking provided either automatically or by a graduate assistant or tutor. While this might be a time and resource efficient method and appropriate in some circumstances, there is one significant limitation in terms of feedback: under such an arrangement teaching staff will receive little if any direct feedback *themselves* about students' levels of understanding. In addition, students often find automated or anonymous marking impersonal and prefer more personal interaction with their teachers, even if this interaction is limited to written communication in the form of comments and/or grades.

Notwithstanding these issues, the following suggestions might provide assistance for staff teaching large groups of students and who are looking for ways to provide formative feedback to them:

- Assess early in the semester — this gives time for feedback and possible improvement
- Provide students with marking criteria prior to their undertaking the assignment to guide progress and help develop independent learning skills
- Prepare a list of the most common or typical problems in assignment submissions and/or exam responses along with explanations/model answers:
 - publish a single sheet containing these on the subject homepage
 - prepare and make available multiple copies of an audiotape detailing these
 - provide brief, general feedback on these verbally to students as a group in lectures/tutorials
- Use a standardised feedback sheet that incorporates the stated criteria
- Where possible and appropriate, use on-line tutors
- Use on-line discussion boards with a framework and initial model for discussions so students can assist each other with assignments – be clear about how collaboration, collusion and copying differ
- Use on-line products that provide hints/help and feedback on student attempts at problem-solving, answering quiz questions and other assignment tasks
- Use a website/subject homepage to provide basic information and FAQs and answers related to assessment
- After using and marking multiple-choice tests, provide students with written rationale and explanation for correct or high scoring answers and/or resources for further reading

3. Fairly assessing a diverse mix of students

Generally speaking, larger classes mean a more diverse and complex student mix. Diversity in educational background and ability is particularly significant in larger classes partly because of the critical mass of differences. The issue of varying levels of student ability or readiness and that of marking workload in large classes are closely related.

Sometimes large classes are used to teach 'service' or compulsory subjects to students from a wide range of courses. In these situations, student diversity in backgrounds, pre-requisite knowledge, expectations and level of interest in the subject matter can be profound.

Some suggestions:

- Require first year students to undertake a foundation unit — already compulsory in some universities — to develop necessary academic/study skills and/or skills to successfully undertake assessment tasks
- Early in the semester, briefly survey students about their prior knowledge and expectations to identify possible issues that may adversely affect assessment
- Set an early 'hurdle task' where students at risk of failing written assessments are identified and offered assistance from the university learning support/development centre
- Organise the provision of 'support' tutorials – supplementary workshops for essay writing or other necessary assessment-related skills from the appropriate university service
- Ensure the provision of English-language assistance from the appropriate university service for students who need such help
- Where possible in assessment tasks (assignments or exams), ask students to consider how concepts relate to their discipline/vocational area (i.e. accept more than one 'right' answer)
- Assign students to tutorials on the basis of their discipline/course, rather than randomly — the focus of these smaller classes are then more likely to be aligned with their interests
- Ensure that tutorials follow lectures (rather than vice versa) and that assessment-related issues are discussed and addressed in detail in these smaller groups
- Develop variations in the assessment tasks that target the discipline background of the different sub-groups of students.

4. Managing the volume of marking and coordinating the staff involved in marking

The time required for the sheer volume of marking for large student groups can be significant. However, some steps can be taken to optimise the use of staff time.

As discussed in the section on the complex student mix, it is useful where possible to develop student skills and understanding related to the assessment requirements prior to their undertaking assessment tasks in order to lessen the marking workload associated with poor quality submissions. Other strategies likely to be helpful include:

- providing clear marking criteria to students
- making past exam papers and model answers readily available
- providing exemplars of various levels of work ('Below acceptable' through to 'High Distinction' or equivalent) to illustrate the differences for students
- For written assessment (assignments or essay-based exams): modelling in, for example, critical analysis, essay writing and use of appropriate style and format
- Directing all students to resources and support for academic/study skills (including printed and on-line resources, workshops and individual tuition) and articulating an expectation that they will be used by students

Other strategies that might be helpful in optimising the task of marking include:

- On-line, computer-based or web-based exams or tests – see 'On-line assessment'
- Developing joint assessment with another subject in the course – this may help to link concepts and develop coherence as well as lessen the load.

A common response to larger class sizes is the employment of sessional staff to assist with teaching and assessment. While at one level this trend might appear to resolve the issue of marking for academic staff with the overall responsibility for subjects, it also brings a new set of issues associated with the coordination, training and support of a subject team.

There are well-known problems associated with the use of teams of sessional staff, especially if they are inexperienced teachers, including disparate understandings of assessment requirements, differences in the level of experience of marking, and a lack of consistency in methods of marking and grading practices. Some of these problems can be reduced or eliminated through the following suggestions:

- Provide paid initial training in assessment for new staff
- Provide paid professional development in the area of assessment for all staff
- Provide consistent criteria to all staff involved in marking
- Ensure the marking criteria are understood by all staff
- Provide model answers, including examples of very good, moderate and poor assignments/exam answers
- Provide marking guides

- Ask all staff to use a standardised feedback sheet incorporating stated criteria
- Ensure avenues of clear communication between staff are in place
- Provide assessment mentoring for inexperienced markers
- Hold weekly paid meetings for sessional staff to discuss assessment-related issues
- Make participation in assessment training, professional development and/or meetings a condition of employment for sessional staff and pay them for attendance
- Require sessional staff to attend 10-15 minutes of a lecture in which assignment requirements are discussed so everyone hears the same information
- Use moderation if necessary

5. Avoiding plagiarism

There is a general perception that the likelihood of plagiarism is exacerbated by large classes. If this is the case, one reason students may deliberately cheat in a large class is because they may feel somewhat anonymous and “lost in the crowd” and therefore believe they are less likely to be caught. Alternatively, if students in large classes plagiarise unintentionally this might be as a result of having limited or no opportunity to check referencing and/or collaboration conventions with a lecturer or tutor. A lack of clear understanding of assessment requirements is particularly an issue for some first year and many international students, for whom higher education referencing and collaboration ‘rules’ are unfamiliar.

The key to minimising plagiarism in large classes is in the design of assessment tasks. For suggestions, see the section ‘Minimising Plagiarism’ and the 36 strategies that can be considered.

Resources on Teaching Large Classes

An Australian Universities Teaching Committee Project: ‘Identifying and supporting effective methods of enhancing learning – teaching large classes’ managed by the University of Queensland has developed suggestions, help and resources related to the teaching of large classes, including assessment issues. See www.tedi.uq.edu.au/largeclasses, in particular the sections ‘Teaching and Assessment in Large Classes’ and ‘Large Classes Across the Disciplines’.