UNIVERSITY OF WEST LONDON
Institute for Teaching, Innovation & Learning

Using Blackboard to Conduct Multiple Choice Exams

UWL Impact Case Studies 2012/2013

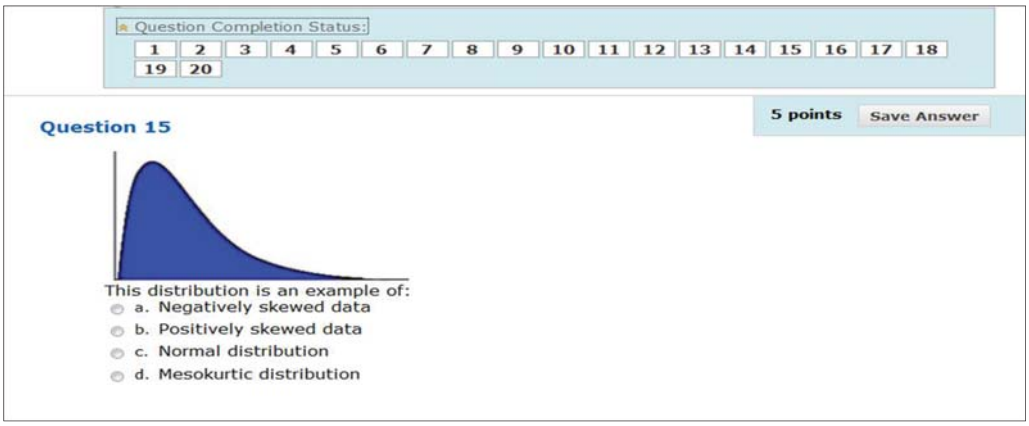
Beth Law
Lecturer in Psychology
School of Psychology, Social Work and Human Sciences

Description

Mulltiple choice tests are widely used within undergraduate degree programmes, especially in the context of mid-module assessments or as a way to test students' understanding of more basic concepts. However, such tests can often be quite time consuming to set up and mark (if done by hand), particularly with large numbers of students. Furthermore, it can be difficult to provide students with past papers of these types of exams, without which students may struggle to understand what will be required of them when they are trying to revise. Therefore, this initiative was conducted primarily for two reasons: firstly, in an attempt to be more time efficient in terms of marking and administration, and secondly, to begin the process of establishing a "bank" of questions that have been used in previous tests, of which a selected number can be released to future students for revision purposes.

Approach

Blackboard provides a wide range of options to module leaders and teaching staff in terms of the capabilities afforded by its "Test building" functions. Questions are first created within a test bank, and selected questions can then be compiled into a test. There are various options available when creating questions; a simple multiple choice format can be used (as was done for this project), with no restrictions on the number of different response options or the number of correct answers. For example, students can be asked to select "one or more correct answers". Images can also be used as part of the question text. In addition, there are a whole host of other question types available, such as "fill in the blanks" or "put these into the correct order". Users are able to use different types of questions within one test, and different questions can be given different weightings if needed. For this project, twenty questions were used which each had four possible responses, only one of which was correct. Each question was given a 5% weighting so that the total mark was equivalent to a percentage.

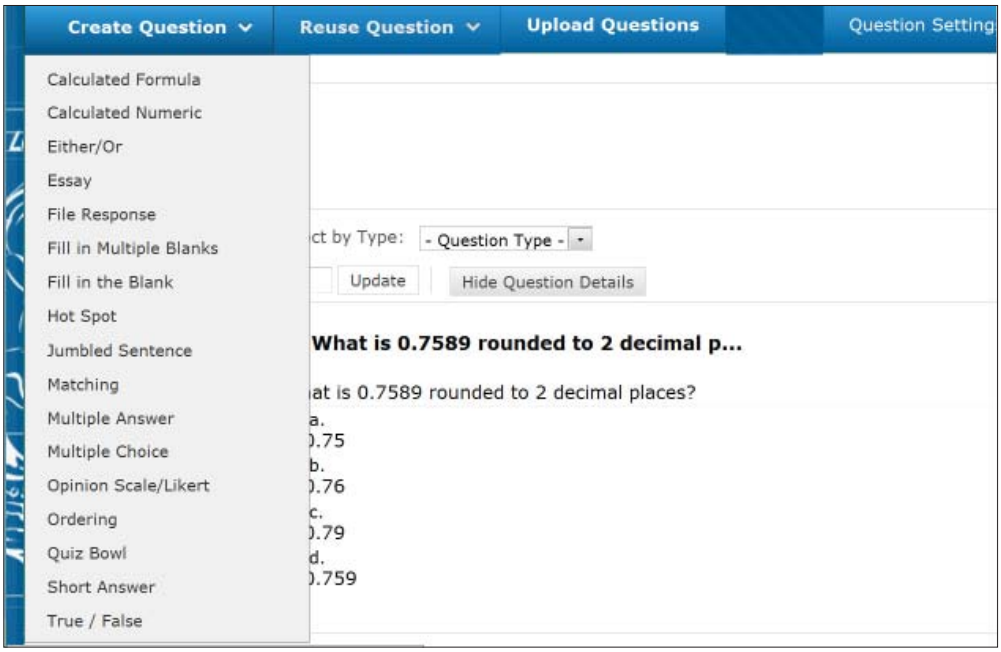


For this assessment, 90 Level 4 students completed a mid-module test on numeracy and statistics. We booked out one computer lab for three consecutive one-hour slots, and students were told which time slot to attend. The test options were set up so that the test did not become available to students until the start time, and was password protected. The invigilator provided students with the password at the start of the test in order to prevent them from taking the exam at home rather than under test conditions. The module leader can also very easily change the test password, which could be done between test slots if desired. The order of questions was randomised to reduce the chances of individuals attempting to copy other students' answers. Once the students completed the test, Blackboard automatically marked all tests and marks were available for the module leader to view in Grade Centre. Marks were then downloaded as an Excel spread sheet (which is automatically generated and provides overall marks as well as responses at the individual item level).

Outcomes

It is estimated that this method saved approximately 9 hours of marking time, and this time saving would be increased with a larger cohort. Although the test questions do take slightly longer to set up than they would if they were simply typed, there is still an overall time saving of approximately 8 hours when this is taken into account. It is also a "greener" method of conducting a test as it removes the need for any paper resources at all (instructions can be incorporated into the first page of the test).

The spread sheet of marks can also be made available to students via Blackboard, which allows them to find their student number and then look at exactly which questions they answered correctly or incorrectly. This enables students to access individual feedback without any input required from the module leader.



Lessons learned

Do: Check that your test is not going to take place at a time that is scheduled for computer updates or Blackboard downtime. Perhaps have a Microsoft Word copy of the test, which could be quickly printed off if IT equipment happened to fail. Some students may see it as an easy opportunity to exploit the many resources on the internet during the test period! Therefore (as with any test) it is a good idea to have invigilation in place and to make it explicit that students are not permitted to access any websites other than Blackboard. If advance notice is provided to the IT Service Desk, the computers in your room can be locked down so that students cannot access sites other than Blackboard.

Don't: Assume that students are familiar with the concept of taking tests or exams on computers. Some students who struggle with ICT may be slightly thrown by the idea (this relates to the point below regarding practice tests), although the process of taking the test is not challenging in terms of the computer skills required.

What makes this approach particularly successful? It is time efficient, provides a wide range of test options that would not be possible with paper tests, and has potential to provide future students with a good revision resource (see below).

Where next?

I believe that the next cohort would benefit from the opportunity to take a "practice" test, which could easily and quickly (~10 minutes) be built from the bank of questions used for this year's test and resit. Practice tests can be made available to students without the password or timing restrictions, to allow for use as a learning tool for their own revision. In addition, test options can be altered to provide students with immediate feedback on their responses on the practice test, allowing them to identify areas which may require further study. A wider variety of questions types could also be incorporated into future tests, such as fill-in the blanks, to make the test more varied and challenging. It will also be worth collecting students' views on this mode of assessment.