

# FORMATIVE ENGINEERING TESTING



## Background

The Blackboard VLE is at the core of our managed learning environment, integrated with additional systems such as Turnitin UK, Wimba and QuestionMark Perception (QMP) - the College's online assessment system. QMP assessments are deployed in Blackboard and are accessed by learners via a 'building block' which automatically authenticates users using credentials from within Blackboard. Summative assessments are mostly delivered in a secure assessment browser, QuestionMark Secure, on computers in our Assessment Centre.

The learners are from the age of 15 to 50 in both part-time and full-time courses. The learning environment was at the College or at the learner's home if they had suitable IT access to the College Blackboard VLE. The College provides a number of IT rooms that the learner's can use during class time as well as outwith class time in the Library/IT Centre which provides flexible use computing facilities.

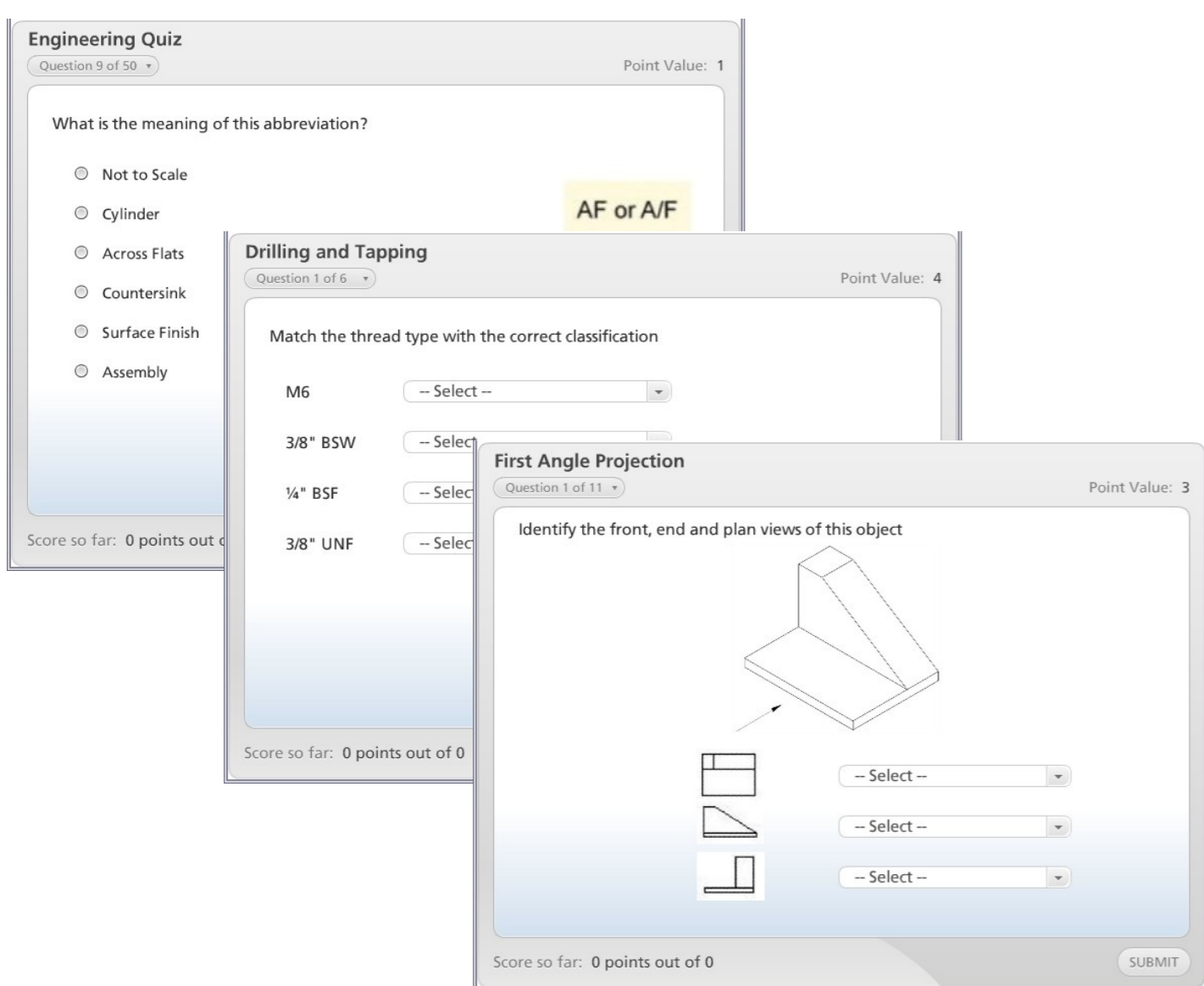


Figure 1: Example questions authored in Articulate Quizmaker

and quizzes were created using Questionmark Perception and some are currently being developed using Articulate Quizmaker. These tests were all computer marked therefore saving considerable staff time, since they did not have to manually mark the paper log book. It is also easy to update or modify questions centrally using Questionmark which is then available to learners through Blackboard.

One of the main drawbacks with online assessment can be if there are technical problems with the various IT systems used since learners would not be able to complete the assessments. An IT Helpdesk is also available to assist with any technical issues and ensure that they are solved as soon as possible.

## Conclusions

There have been over 800 learners using e-Assessment over the last few years and we have had a positive response in course feedback at the end of the academic year. Many prefer the e-Assessment method rather than having to use the paper-based log books to record their answers.

In the future, the college plans to develop these formative tests and quizzes further using Articulate Quizmaker as well as Questionmark Perception. Summative assessments will also be created using SQA's SOLAR platform. These assessments will be converted from existing Assessment Support Packs or NABs and undertaken in controlled examination rooms at the College.

## Outcomes

Formative e-Assessment was used for reinforcement of learning throughout the courses and covers subjects such as Health & Safety, Welding, Lathes, Manual Metal Arc Welding, Core Skills and First & Third Angle Projection.

Learners could take tests & quizzes at anytime using Blackboard so they could use allocated time during classes as well as non-timetabled hours to complete these various assessments.

In the past learners would write out the questions and answers by hand in paper log books which had to be kept in the College which meant learners were not able to complete them at home. The paper log books had to be manually marked by course staff and the cost of providing these increased each year while also not environmentally friendly, so the use of online assessments helped reduce the use of paper as part of a College-wide environmental policy.

## e-Assessment Advantage

The learners enjoyed the freedom of doing some assessments at home in their own time as well as in College. They also had the ability to take these tests multiple times so that they could reinforce the subject knowledge throughout the academic year.

Question types used included multiple-choice, drag & drop, matching, drop-down list and multiple-response. Question types used included multiple-choice, drag & drop, matching, drop-down list and multiple-response. Tests

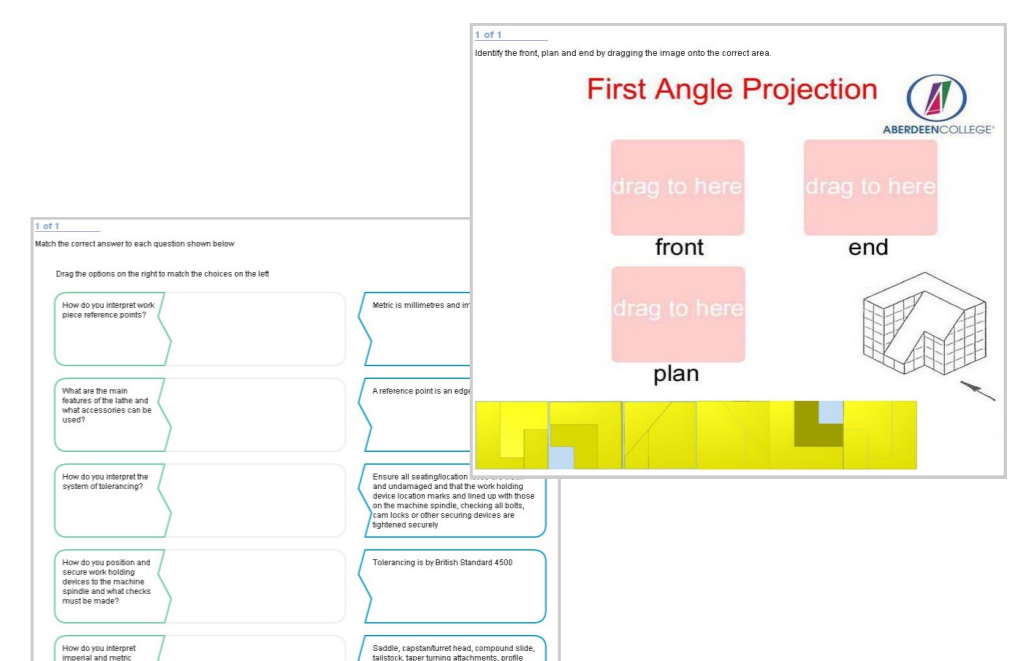


Figure 2: Example questions authored in QuestionMark Perception