



CMT313 Software Engineering Module Leader: Helen Phillips

Automated Assessment Tool

Over the last 5 Years there has been a significant increase in class sizes in Universities. For example, the numbers on the MSc Computing Degree in the School of Computer Science and informatics at Cardiff University have increased by 200%. This growth in cohort sizes has unfortunately but naturally resulted in an increase in the turnaround time for assessments and feedback.

Although automated marking of assessment is not desirable for all assessments, the assessment of knowledge and understanding of a topic often can be automated.

Traditionally when people think about assessment they focus on **Summative assessment** or '*assessment of learning*'. The evaluation of student learning at the end of a module/unit or topic by comparing it against some standard or benchmark. The completion of the assessment results in a mark that contributes to the final module mark.

A more recent concept is 'assessment for learning' or **formative assessment** which focuses on the opportunities to develop students' ability to evaluate themselves, to make judgements about their own performance and improve upon it. Formative assessment, including diagnostic testing, are designed to help students identify their strengths and weaknesses and target areas that need work. For this type of assessment feedback ideally needs to be immediate, this is challenging to achieve with large classes.

Effective feedback to students is a vital component of assessment for learning, as students need to understand how to modify their approach to reach a higher level of performance.

When designing a module, lecturers are encouraged to include both types of assessment. One way to include formative assessment with quick or immediate feedback is to incorporate an Automated Assessment Tool (AAT) to mark students work.

There is need for an easy-to-use flexible automated assessment tool that provides both formative and summative assessments. There are several Virtual learning Environments that provide facilities for online tests, but commonly, these are expensive, have limited flexibility and take time to learn how to use as well as additional time 'upstream' to form assessments and the testing framework to be applied to student submissions.