IMPROVING RESULTS WITH POSITIVE DIRECTED FEEDBACK IN SUMMATIVE ASSESSMENTS

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Problem

Formative assessments are fast becoming the most commonly used approach to computer aided assessments. Much better at giving feedback, students are able to take a formative test after studying new material, test their knowledge, review their answers and find out exactly where they are going wrong. Unfortunately despite being a strong approach for improving student learning, formative assessments do have several problems: -

- The integrity of the questions is lost once students have had access to the answers. This means they cannot be re-used without the risk of students remembering the answer rather than the reason for the answers.
- Observations have shown that some students do not try as hard when working with formative assessments as they are “not as serious” as summative exams. This kind of attitude is synonymous with answers in the back of textbooks, where students copy the answers to get the questions correct, rather than using the answers as a means of self-certification.
- Students do not necessarily receive the feedback that they need. Without detailed feedback for all incorrect answers, it is difficult for a student to understand the full reason why their answers were incorrect.
- Lecturers do not get the feedback that they require from the students. Without ‘more accurate’ summative results, lecturers are often not convinced as to how well the students are learning the materials. They will often dismiss poor results as being caused by the students not taking them serious enough

Approach

A new approach undertaken at the University of Wales, Aberystwyth, using the Tweek Student Centred Learning Environment, is to use the advantages of both summative and formative assessments to address these problems.

Tweek links detailed, fine-grained learning objectives to each individual question within a module. On completion of the summative assessment the students are able to review the learning objectives of the questions that were incorrect. These learning objectives are also accompanied with links to course materials for the module, enabling students to carry out further study.

How Does the Approach Solve the Problems?

The first problem discussed was the loss of integrity when questions are used for formative assessments. With Tweek's approach the students are not given the individual answers but rather a list of all the learning objectives that needs their attention. In this way they are encouraged to undertake further research into the topics thereby gaining a greater understanding of the material.

The second problem discussed was the difference in seriousness between summative and formative tests. As a summative approach is taken we have found that students are more serious about the assessments and work harder toward preparing for the assessments. As these assessments are given at regular intervals throughout the semester, students are more consistently studying the material rather than simply cramming during exam periods.

The third problem discussed was the lack of appropriate feedback. Using the Tweek approach, as objectives are a core component of the environment, the initial investment in developing the learning objectives is soon recuperated. With the integration of learning objectives with course materials, the students are further directed to the appropriate materials to study, further accelerating the learning process for the students.

The final problem discussed was the lack of feedback given to the lecturer. With Tweek's summative approach, the lecturer can continue to receive feedback through test results, yet without reducing the amount of feedback offered to the students.

Results and Further Work

Tweek is the recommended method of online assessment at Aberystwyth. It has been used successfully on a large number of first year courses both in Computer Science and other unrelated disciplines. Staff now moving over to Tweek have commented that its main selling point is that of the integrated learning objectives. The added functionality makes Tweek a learning environment in the real sense of the word.

Students have responded very favourably to the feedback given by the learning objectives. Most notably they have voiced concern over modules that have not yet integrated the objectives. It remains to be seen as to whether staff associated with these modules will now apply the recommendations.

Learning objectives are currently integrated with assessments and course materials. They are also linked to the Coursework module of Tweek, allowing the same kind of assessment and feedback of coursework. Very shortly the Attendance module of Tweek will link into the learning objectives allowing students who missed particular lectures to identify the materials that they missed, so that they may catch up.

References

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