Comparison of two computer-assisted grading approaches

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PGCert in Academic Practice

Comparison of two computer-assisted grading approaches

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This research compared efficiency and effectiveness of rubric- and comment-based marking and feedback in an online submission system. Two comparable assignments of a computer science module were graded by two tutors. Feedback was provided through BlackBoard rubrics for the first and TurnItIn QuickMark for the second assignment. Semi-structured interviews about marking experience and feedback quality were conducted with tutors and students and analysed for common themes. Results show that tutors found rubric marking easier and more effective, while students emphasized the importance of general feedback quality, specifically constructiveness, without showing a preference for either format.

On Feedback:

The Good:
Feedback is critical to student learning, knowledge retention, motivation etc. (Yorke, 2003).

The Bad:
Feedback can distract students from actual learning goals, and often over-shadow empirically more important lecturer tasks such as classroom management.

The Ugly:
Providing feedback, especially in the form or marking, is a major time consumer for lecturers (Sims-Knight and Upchurch, 2001).

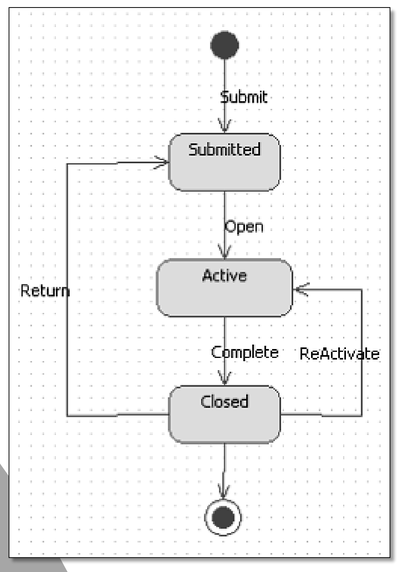
Research Aims:
Comparing efficiency and effectiveness of two computer-assisted grading/feedback approaches

The Assignments:

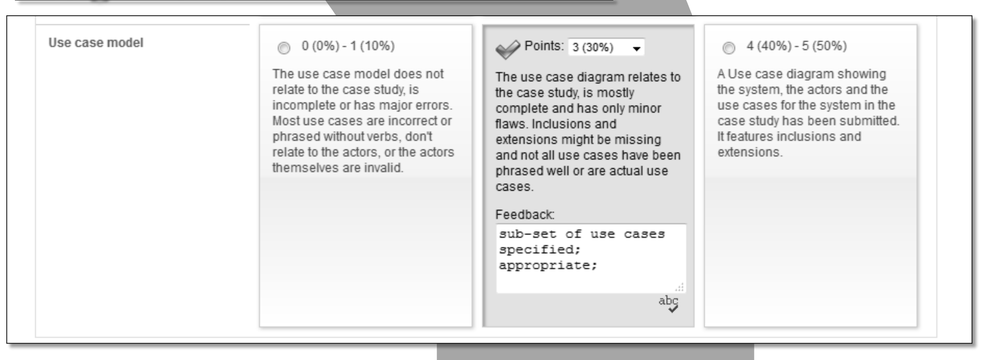
Assignment 1 (BlackBoard rubrics):
- Process diagram
- Use case diagram

Assignment 2 (TurnItIn QuickMark):
- Business Type Model
- Business Concept Model

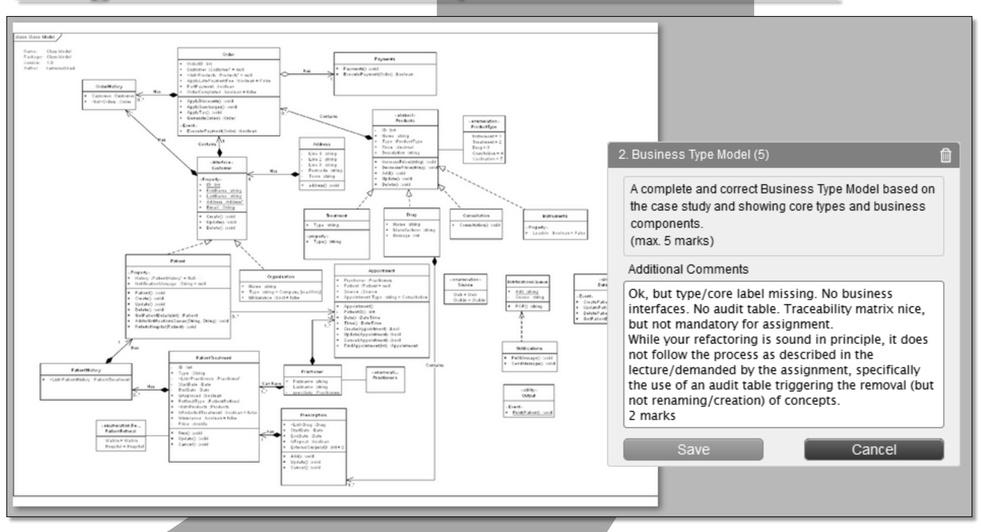
Both assignments weighed 10% of towards the final grade. Students were required to use feeedback to improve diagrams and models as part of assignment 3.



Assignment 1: BlackBoard rubrics



Assignment 2: TurnItIn QuickMark comments:



Impact:
- Help lecturers estimate appropriateness and requirements of different marking aids
- Inform teaching practice about feedback perception

Results:

Students:
- Accessibililty/UI issues feature prominently in student reports.
- Preference for feedback format is split right down the middle, with half of students preferring rubrics and the other half preferring comments.
- Overall, students don‘t mind the format so much as long as feedback contains individual and constructive components on how they can improve their work.

Tutors:
- Rubric marking preferred due to it being perceived as faster and easier, requiring fewer manual steps and ending in a clear grade.
- While some issues in TurnItIn QuickMark were clearly implementation issues which could be fixed, there seems to have been a general appreciation of rubric-based marking over free-comment based marking.
- However, rubric-based marking seems to discourage tutors from writing individual comments.

Limitations:
- Scope of a pilot project (2 tutors, 6 students)
- Qualitative operationalisation
- Results applicable to computing/specific module

Conclusions:
- Despite certain up-front efforts (e.g. creating respective marking criteria), rubrics can facilitate grading for tutors.
- Care must be taken that students still receive individual feedback on their work as part of the rubric.

Analysis:
Search Interviews for themes and topics

The Interviews:

After each assignment, semi-structured interviews were conducted with students and tutors:

Student sample questions:
- *Was the feedback clear?*
- *Was it easy to understand your grade?*
- *Will the feedback help you to improve your submission for element 3?*
- *Any other thoughts or comments regarding the feedback?*

Tutor sample questions:
- *Did you find [method] marking easy?*
- *What did you like/dislike?*
- *Did it take long to mark?*
- *Were you able to give the feedback you wanted to give?*
- *Did [method] constrain your feedback?*

The interviews, representing participants‘ perceptions (as opposed to facts as such) were analysed for common themes and topics towards efficiency and effectiveness of the two feedback methods.

Bibliography:

Sims-Knight, J. E. and Upchurch, R. L. (2001) What’s Wrong with Giving Students Feedback? In: *Proceedings of the American Society for Engineering Education Annual Conference*.

Yorke, M. (2003) Formative assessment in higher education: Moves towards theory and enhancement of pedagogic practice. *Higher education*, 45 (4), p.477 – 501.

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