



Semant

Enhancing student buy-in: pre-reading and feedback in the flipped classroom

The screenshot shows the SEMANT interface. At the top, there's a navigation bar with 'SEMANT', 'Assessments', 'Analyse', 'Upload Student Photos', and 'Export Marks'. A user is logged in as 'Sandesh'. Below the navigation, a quiz question is displayed: 'Q. What aspect of the course (as described in the course profile) are you most looking forward to?'. The interface shows four themes identified from student responses. Theme 1 includes terms like 'physic', 'quantum', 'modern', 'learn', 'rel', and 'interest'. Theme 2 includes 'learn', 'content', 'lectur', 'actr', 'aspect', and 'work'. Theme 3 includes 'concept', 'class', 'practic', 'result', 'pass', and 'laborator'. Theme 4 includes 'electromagnet', 'electr', 'aspect', 'knowledg', and 'engin'. To the right, a 'Theme Visualisation: Theme to Word Mapping' diagram shows four central nodes (Theme 1, 2, 3, 4) connected to various related terms. Theme 1 is connected to 'physic', 'interest', 'concept', 'class', 'practic', 'laborator', 'pass', 'result', 'concept', 'class', 'practic', 'laborator', 'pass', 'result'. Theme 2 is connected to 'work', 'lectur', 'actr', 'aspect', 'content', 'learn', 'work', 'lectur', 'actr', 'aspect', 'content', 'learn'. Theme 3 is connected to 'concept', 'class', 'practic', 'laborator', 'pass', 'result', 'concept', 'class', 'practic', 'laborator', 'pass', 'result'. Theme 4 is connected to 'engin', 'knowledg', 'aspect', 'electr', 'electromagnet', 'engin', 'knowledg', 'aspect', 'electr', 'electromagnet'.

Ensuring that students come to class prepared to learn is key to effective active learning strategies in large classes. One way to achieve this is to assign pre-reading, and to require students to complete an assessed reading quiz beforehand. Making this a concept-based, short-answer quiz (rather than multiple choice) requires students to effectively engage with the material. One of the challenges is in marking these quizzes and providing useful feedback to large classes.

Semant permits teaching staff to easily analyse and mark the short answer quiz responses submitted in a Blackboard quiz. The tool allows staff to identify common themes in the written responses, to rapidly pinpoint concepts students struggle with and to provide feedback to large classes. Selected de-identified student responses can be used in class to focus discussion around common misconceptions which significantly increases student engagement in the process.

Project lead

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Project Keywords

large classes, quiz, semantic analysis

Who's doing it

Four Physics courses and one First Year Engineering course are piloting the redeveloped system.

Achievements to date:

This project is based on a UQ-developed prototype used in PHYS1001. Development work ensures sustainability over time and provides additional functionality. An LTI integration automates data flow between Blackboard and Semant. Component and interface redesign reduces marking time and increases the amount and timeliness of personalised feedback to students.

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