

VIDEO ASSIGNMENTS IN MATHEMATICS

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ABSTRACT

The number-one selection criteria for recruiting graduates, according to employers and graduate perceptions (as stated in the Graduate Outlook Survey 2013), is interpersonal and communication skills. In light of this, and in the ongoing development of its curricula, the mathematics discipline at the University of Queensland (UQ) is enhancing the framework used to test and improve oral skills for prospective mathematics graduates. In this presentation, we discuss one of these initiatives; the implementation of a video assignment project in a third-year course on partial differential equations currently running at UQ. It is known that video assessment can be successfully combined with new interactive teaching techniques developed for other sciences (e.g. Eric Mazur's Flat Space, Deep Learning project) and has been tested within other disciplines at UQ. The goal is to determine whether video assessment can be used to suitably test and develop mathematics students' oral skills and how video assessment differs from other forms of oral assessment.

The assessment involves groups of students giving presentations in a lecture room within a one-hour time slot. Each student within the group is to give an eight-minute presentation in front of his/her group members, with an additional two minutes at the end of the presentation designated for question time. The presentation thematic is chosen by each student from a range of possible project choices set within the course, the only restriction being that no two students in a given group can present the same project. The presentation is recorded by group members and uploaded using an e-learning video platform implemented within the course Blackboard. Students are assessed on their performance based on established criteria (dictate, organisation, presence, etc) and also on their ability to reflectively learn from their experience; i.e. upon viewing their presentation, how the student assesses their own performance.

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