# In what ways do lecturers receive and use feedback from large first year mathematics classes?

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*In this poster we discuss the results of a qualitative study designed to further our understanding of the relevance of Maths Support Centre feedback, as generated by tutors to lecturers of large (>65 students) classes. As part of this study, we conducted three separate interviews with each of thirteen lecturing staff over the course of one semester. We discuss the ways in which these lecturers receive and use feedback from their students and examine where the feedback received by a Maths Support Centre sits in the general context of this feedback. We conclude that this form of feedback is one of the most valuable to lecturers. We also discuss how feedback via a Maths Support Centre to lecturers can be enhanced.*

*Keywords: Feedback, mathematics support, large class lecturing.*

## Introduction

In this proposal we report on a study aimed at examining the ways in which lecturers of large mathematics classes receive and use feedback from their courses, with a particular focus on how they use feedback received via the Maths Support Centre (MSC).

**Research Questions:**

1. How do lecturers receive and use feedback from large first year mathematics classes?

2. Why should an MSC collect qualitative feedback data on students' visits? In what ways, if any, do lecturers find the feedback provided by the MSC on students' visits, useful? How do they use it?

3. Where does MSC feedback sit placed in the general context of feedback?

4. As a result of discussing the nature of the MSC feedback with the lecturers how can the MSC improve its service (to learners/ to lecturers)?

## Methodology

Thirteen university lecturers from University College Dublin volunteered to participate in this study. Lecturing experience varied from two to seventeen years and only two lecturers were teaching their particular module for the first time. The modules' sizes ranged from 66 to 550 students in subjects including Calculus, Statistics, Linear Algebra, Computer Science and Applied Mathematics. Twelve of the 13 classes we examined were mathematics/statistics modules taught to non-mathematicians, in particular the cohorts consisted of agriculture, computer science, engineering, business, science and applied mathematics students.

Thirty-seven semi-structured interviews consisting of three interviews with each lecturer were conducted in semester one of 2014/15 (interview one was not conducted with one lecturer as there

was no MSC feedback to discuss and the final interview for one module was conducted with both co-lecturers of that module simultaneously). This feedback, on the content of each students' visit, is generated by the attending MSC tutor and electronically uploaded (anonymously) in real time via the MSC software system (Cronin & Meehan, 2015), where it can viewed at any time by the lecturer. Interview 1 was an exploratory interview conducted in week 4 of the teaching term asking lecturers to read through the MSC feedback from their modules. The mathematical content of this feedback is discussed in Curley & Meehan (2016). Interview 2 was conducted in week 8 (after the midterm examinations had taken place) where lecturers were asked to review the MSC feedback collected from their module to see if they could identify the topic and mathematical difficulty being discussed. The third and final interview was conducted three weeks after teaching had finished, when lecturers were invited to summarise their experiences with the MSC feedback mechanism throughout that term and also to discuss the value associated with each of the feedback forms received during the module. All interviews were transcribed and analysed using thematic analysis (Braun & Clarke, 2006).

## Preliminary Findings

Lecturers reported nine ways in which they receive feedback from large classes. These are: in-class questions, after-class questions, emails, continuous assessment (e.g. quizzes), midterms and final exams, module tutors, online activity (Blackboard, Moodle, WebWork etc), the institution's Module Feedback system, staff-student fora and Maths Support Centre feedback. Lecturers identify MSC feedback as one of the most valuable forms of feedback in a large mathematics class. In particular it is specific, detailed and lecturers reported that it aligns closest to in-class questions as it is content based, formative and in real time. It is mathematically accurate being the MSC tutor's interpretation of the student's difficulty. Lecturers stated that it is reassuring and confirms what is been asked at (and after) lectures. Many stated MSC feedback has had impact on their practice including; revising lecture content, using MSC feedback to write midterms and revision classes, omitting material and delaying (and bringing forward) continuous assessment components.

## References


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